PUBLIC HEALTH REPORTS

VOL. 29. APRIL 3, 1914. No. 14

THE NOTIFIABLE DISEASES.

THEIR PREVALENCE IN CITIES DURING 1912.

DIPHTHERIA, MALARIA, MEASLES, EPIDEMIC CEREBROSPINAL MENINGITIS, POLIOMYELITIS (INFANTILE PARALYSIS), SCARLET FEVER, SMALLPOX, TUBERCULOSIS, TYPHOID FEVER, LEPROSY, AND RABIES—CASES REPORTED, CASE RATES PER 1,000 POPULATION, AND FATALITY RATES PER 100 CASES.

[Compiled by direction of the Surgeon General.]

The tables which follow were made up from information furnished to the Surgeon General of the Public Health Service by the health officers of the cities included. The information was requested from the health departments of all cities in the continental United States having a population of 100,000 or more at the 1910 census. The absence of a city from a table does not necessarily mean that there were no cases in that city. In some instances it simply indicates that the city health department either had no record of the prevalence of the disease or failed to furnish the information. Similar tables for those States able to furnish information of the prevalence of these diseases within their respective jurisdictions for the year 1912 were published in the Public Health Reports, volume 29, No. 3, January 16, 1914, and reprinted as reprint No. 163. The State tables are recommended for study in connection with the ones here given for cities.

Abbreviated tables have been prepared showing the cities reporting the highest and lowest case rates; also the highest and lowest case fatality rates. The higher notified case rates may be due to some extent to the fact that the health department has been successful in securing complete notification of cases, while a low case rate may simply mean that the health department has not attempted to secure complete notification of cases or has been unsuccessful in its attempts. However, when in conjunction with the case rates the fatality rates are considered some hint is given as to the significance of the former.

An unusually high case fatality rate may mean one of three things: First, that the notification of cases has been less complete than the registration of deaths; second, that the disease has been of unusual

virulence; or, third, that the practicing physicians treat the disease less successfully than is customary in other cities. On the other hand, low case fatality rates may also be presumed to signify one of three things, or a combination of the three, namely: First, that the health department has secured a satisfactorily complete notification of cases; second, that the disease has been mild and of low virulence; or, third, that the practicing physicians treat the disease with success above the average.

Diphtheria.

In the following table especial attention is invited to the low case fatality rates in Salt Lake City, Denver, and Rochester, and particularly to the exceedingly low rate in Salt Lake City, where there were over 50 cases of diphtheria reported for each death recorded:

Case rates per 1,000 inhabitants.

Highest.		Lowest.	
Cities.	Rates.	Cities.	Rates.
Grand Rapids, Mich	8.46	Spokane, Wash	0.54
Dayton, Ohio	4.83	Omaha, Nebr	.67
Cleveland, Ohio	4.36	San Francisco, Cal	.75

Fatality rates per 100 cases.

Highest.		Lowest.	
Cities.	Rates.	Cities.	Rates.
Toledo, Ohio	15.56	Salt Lake City, Utah	1.88
Fall River, Mass	15.47	Denver, Colo	3.18
New Bedford, Mass	15.20	Rochester, N. Y	3.23

Measles.

Attention is invited to the case fatality rates in Richmond, Salt Lake City, and Indianapolis, and especially in Richmond, where there were 851 cases reported with only 1 death. The returns in measles for Richmond are perhaps as accurate as those for any city in the United States. In fact, it is possible that they are more accurate than those of any other city, for the health department has for a number of years paid particular attention to the prevalence of measles and has gone to pains to investigate all cases and suspicious cases, and also all deaths and suspicious deaths, including those of broncho-pneumonia, so that both the case returns and the death returns are unusually carefully controlled.

Case rates per 1,000 inhabitants.

Highest.		Lowest.	
Cities.	Rates.	Cities.	Rates.
Indianapolis, Ind	14.40	Nashville, Tenn	0.18
Salt Lake City, Utah	10.61	Omaha, Nebr	.20
Cambridge, Mass	9.42	Fall River, Mass	.25

Fatality rates per 100 cases.

Highest.		Lowest.	
Cities.	Rates.	Cities.	Rates.
Providence, R. I	15.65	Richmond, Va	0.12
Trenton, N. J	11.86	Salt Lake City, Utah	.18
Bridgeport, Conn	6.25	Indianapolis, Ind	.33

Meningitis (Epidemic Cerebrospinal).

Of special interest in the following table are the low case fatality rates in San Francisco, Omaha, and Nashville, and especially in San Francisco, where there were 5 cases reported for each death:

Case rates per 1,000 inhabitants.

Highest.		Lowest.	
Cities.	Rates.	Cities.	Rates.
Nashville, Tenn	0.86		
Cincinnati, Ohio	.20		
Denver, Colo	.12		

Fatality rates per 100 cases.

Highest.		Lowest.	
Cities.	Rates.	Cities.	Rates.
		San Francisco, Cal	20.00
		Omaha, Nebr	40.00
		Nashville, Tenn	47.42

Poliomyelitis (Infantile Paralysis).

In the following table the fatality rate in St. Louis is of special interest, being a little less than 5.5 per cent. This probably indicates an unusual interest on the part of the health department and the attainment of satisfactory notification. It may, however, mean that the form of the disease present was unusually mild.

Case rates per 1,000 inhabitants.

Highest.		Lowest.	
Cities.	Rates.	Cities.	Rates.
Los Angeles, Cal.	0.663	Richmond, Va.	0.008
Cleveland, Ohio.	.189	Albany, N. Y.	.009
New York, N. Y.	.099	Columbus, Ohio.	.010

Fatality rates per 100 cases.

Highest.		Lowest.	
Cities.	Rates.	Cities.	Rates.
Albany, N. Y.	100.00	St. Louis, Mo.	5.40
Newark, N. J.	70.00	New Orleans, La.	11.11
Cincinnati, Ohio.	62.50	San Francisco, Cal.	12.50

Scarlet Fever.

In this table also the main point of interest is in the low fatality rates in Richmond, San Francisco, and Lowell, Richmond having had 326 cases with only 1 death.

Case rates per 1,000 inhabitants.

Highest.		Lowest.	
Cities.	Rates.	Cities.	Rates.
Lowell, Mass.	8.026	San Francisco, Cal.	0.443
Syracuse, N. Y.	4.269	Omaha, Nebr.	.466
Hartford, Conn.	3.799	Seattle, Wash.	.501

Fatality rates per 100 cases.

Highest.		Lowest.	
Cities.	Rates.	Cities.	Rates.
Omaha, Nebr.	10.00	Richmond, Va.	0.31
Chicago, Ill.	6.92	San Francisco, Cal.	.52
Rochester, N. Y.	6.88	Lowell, Mass.	.69

Smallpox.

There are several points of interest about this table. One is that it is possible for the disease to be as prevalent in cities as is shown by the case rates. This is especially true when we consider that smallpox is one of the most readily and surely controllable diseases the health department has to deal with, and its possibility of control has been

repeatedly demonstrated so clearly that its meaning is readily understood even by school children. The manner in which the disease has been wiped out of the Philippines and Cuba, as well as other places, where at one time it was exceedingly common and levied a large tax in sickness and deaths, is familiar to health officials.

The high fatality rates indicate the presence of the virulent form of the disease. The low fatality rates signify that it was the mild form that was present. The range between the fatality rates of the virulent form, such as existed in Philadelphia and Chicago, with rates of 10 and 11 per cent, and of the mild form in Salt Lake City and St. Paul, with rates of 0.11 and 0.16 per cent, is of especial interest. In Philadelphia the 1 death represented 9 cases; in Chicago the 1 death represented 11 cases. On the other hand, in Salt Lake City 1 death represented 885 cases and in St. Paul 636 cases.

Case rates per 1,000 inhabitants.

Highest.		Lowest.	
Cities.	Rates.	Cities.	Rates.
Salt Lake City, Utah	8.745	New York, N. Y.	0.004
St. Paul, Minn	2.388	Philadelphia, Pa	.006
Spokane, Wash	2.339	Grand Rapids, Mich	.009

Fatality rates per 100 cases.

Highest.		Lowest.	
Cities.	Rates.	Cities.	Rates.
Philadelphia, Pa	11.11	Salt Lake City, Utah	0.11
Chicago, Ill	10.29	St. Paul, Minn	.16
Cleveland, Ohio	9.09	San Francisco, Cal	.95
New York, N. Y	9.09	Richmond, Va	2.70

Tuberculosis.

Of particular interest in this table are the low fatality rates of Hartford, Boston, and Newark, in which approximately 3 cases were reported for each death. These rates are in all probability due to the sucess of the health department in getting cases reported.

Case rates per 1,000 inhabitants.

Highest.		Lowest.	
Cities.	Rates.	Cities.	Rates.
Newark, N. J	4.701	Scranton, Pa	0.530
Boston, Mass	4.671	Spokane, Wash	.595
New York, N. Y	4.493	Grand Rapids, Mich	1.075

Fatality rates per 100 cases.

Highest.		Lowest.	
Cities.	Rates.	Cities.	Rates.
Richmond, Va	96.11	Hartford, Conn	27.78
Lowell, Mass	94.02	Boston, Mass	32.90
Nashville, Tenn	91.35	Newark, N. J	37.02

Typhoid Fever.

In this table both the case rates and fatality rates are of particular interest. The high fatality rates simply mean the unsatisfactory notification of cases. The low fatality rates probably mean the satisfactory notification of cases rather than an unusually mild form of the disease. The low fatality rates of Hartford and Denver, being approximately 5 and 6 per cent, respectively, probably represent a fairly close approximation to the usual fatality rate of the disease, if there be such a usual rate.

Case rates per 1,000 inhabitants.

Highest.		Lowest.	
Cities.	Rates.	Cities.	Rates.
Birmingham, Ala	3.261	Jersey City, N. J	0.210
Grand Rapids, Mich	2.674	Rochester, N. Y	.386
Denver, Colo	2.163	Cleveland, Ohio	.454

Fatality rates per 100 cases.

Highest.		Lowest.	
Cities.	Rates.	Cities.	Rates.
Dayton, Ohio	39.29	Hartford, Conn	5.26
Syracuse, N. Y	26.09	Denver, Colo	6.02
Rochester, N. Y	25.84	Worcester, Mass	7.14

Reported Prevalence for the Year 1912 in Certain Cities.

DIPHTHERIA.

Cities.	Estimated population July 1, 1912.	Cases.	Deaths.	Case rate per 1,000 inhabitants.	Fatality rate per 100 cases.
Over 500,000 inhabitants:					
Boston, Mass	711,128	1,539	102	2.164	6.62
Chicago, Ill	2,294,711	7,288	950	3.175	13.03
Cleveland, Ohio	596,970	2,605	166	4.363	6.37
Detroit, Mich	503,445	1,436	189	2.852	13.16
New York, N. Y	5,064,237	13,533	1,125	2.672	8.31
Philadelphia, Pa	1,606,102	3,080	373	1.917	12.11
St. Louis, Mo	712,027	[1] 2,548	170	3.578	6.67

[1] From Apr. 1, 1912, to Mar. 31, 1913.

Reported Prevalence for the Year 1912 in Certain Cities—Continued.

DIPHTHERIA—Continued.

Cities.	Estimated population 1912.	Cases.	Deaths.	Case rate per 1,000 inhabitants.	Fatality rate per 100 cases.
From 300,000 to 500,000 inhabitants:					
Cincinnati, Ohio	387,543	638	60	1.646	9.40
Los Angeles, Cal	386,014	433	25	1.121	5.77
Milwaukee, Wis	409,279	751	102	1.876	13.58
Newark, N. J	369,317	1,098	91	2.973	8.28
New Orleans, La	350,695	1,072	58	3.056	5.41
San Francisco, Cal	433,488	326	28	.752	8.58
Washington, D. C	342,776	393	15	1.146	3.81
From 200,000 to 300,000 inhabitants:					
Denver, Colo	230,249	377	12	1.637	3.18
Indianapolis, Ind	246,928	633	35	2.563	5.52
Jersey City, N. J	281,497	391	.....	1.389	.....
Providence, R. I	235,222	848	75	3.605	8.84
Rochester, N. Y	230,414	495	16	2.148	3.23
St. Paul, Minn	266,300	392	23	1.472	5.86
Seattle, Wash	277,420	224	11	.807	4.91
From 100,000 to 200,000 inhabitants:					
Albany, N. Y	101,726	328	[2]9	3.224	8.84
Atlanta, Ga	167,041	[1] 280	22	.....	.....
Birmingham, Ala	150,249	220	14	1.464	6.36
Bridgeport, Conn	108,999	131	17	1.201	12.97
Cambridge, Mass	107,734	264	26	2.450	9.84
Columbus, Ohio	193,822	415	39	2.141	9.39
Dayton, Ohio	120,364	582	43	4.835	7.38
Fall River, Mass	122,521	168	26	1.371	15.47
Grand Rapids, Mich	118,163	100	10	8.462	10.00
Hartford, Conn	103,177	342	37	3.314	10.81
Lowell, Mass	108,768	140	16	1.287	11.42
Nashville, Tenn	112,774	91	7	.806	7.69
New Bedford, Mass	104,302	125	19	1.198	15.20
Omaha, Nebr	128,912	87	11	.674	12.64
Richmond, Va	131,453	206	8	1.567	3.88
Salt Lake City, Utah	101,207	159	3	1.571	1.88
Spokane, Wash	120,994	66	5	.545	7.57
Syracuse, N. Y	143,602	422	24	2.938	5.68
Toledo, Ohio	176,798	379	59	2.144	15.56
Trenton, N. J	102,071	135	14	1.322	10.37
Worcester, Mass	152,150	411	26	2.701	6.32

MALARIA.

Over 500,000 inhabitants:					
Boston, Mass	711,128	42	1	.....	.....
Chicago, Ill	2,294,711	.....	5	.....	.....
Cleveland, Ohio	596,970	13	2	.....	.....
Detroit, Mich	503,445	.....	3	.....	.....
New York, N. Y	5,064,237	[1] 20	20	.....	.....
Philadelphia, Pa	1,606,102	47	3	.....	.....
St. Louis, Mo	712,027	.....	[1] 23	.....	.....
From 300,000 to 500,000 inhabitants:					
Los Angeles, Cal	386,014	(1)	2	.....	.....
Newark, N. J	369,317	39	2	.....	.....
New Orleans, La	350,695	(1)	20	.....	.....
San Francisco, Cal	433,488	12	9	.....	.....
Washington, D. C	342,776	.....	4	.....	.....
From 200,000 to 300,000 inhabitants:					
Indianapolis, Ind	246,928	(1)	3	.....	.....
Jersey City, N. J	281,497	2	.....	.....	.....
From 100,000 to 200,000 inhabitants:					
Atlanta, Ga	167,041	(1)	8	.....	.....
Birmingham, Ala	150,249	.....	45	.....	.....
Cambridge, Mass	107,734	(1)	1	.....	.....
Nashville, Tenn	112,774	.....	13	.....	.....
Richmond, Va	131,453	(1)	3	.....	.....
Toledo, Ohio	176,798	.....	1	.....	.....

[1] The health officer states that cases are known not to be completely reported.
[2] From Apr. 1, 1912, to Mar. 31, 1913.

Reported Prevalence for the Year 1912 in Certain Cities—Continued.

MEASLES.

Cities.	Estimated population 1912.	Cases.	Deaths.	Case rate per 1,000 inhabitants.	Fatality rate per 100 cases.
Over 500,000 inhabitants:					
Boston, Mass	711,128	5,666	111	7.967	1.95
Chicago, Ill	2,294,711	6,784	119	2.956	1.75
Cleveland, Ohio	596,970	2,230	34	3.735	1.52
Detroit, Mich	503,445	.....	44	.....	.....
New York, N. Y	5,064,237	39,018	671	7.704	1.72
Philadelphia, Pa	1,606,102	2,279	50	1.418	2.19
St. Louis, Mo	712,027	[1] 6,549	[1] 73	9.197	1.11
From 300,000 to 500,000 inhabitants:					
Cincinnati, Ohio	387,543	2,715	34	7.005	1.25
Los Angeles, Cal	386,014	253	1	.655	.39
Milwaukee, Wis	400,279	2,316	25	5.785	1.07
Newark, N. J	369,317	818	28	2.214	3.42
New Orleans, La	350,695	324	2	.923	.61
San Francisco, Cal	433,488	3,451	47	7.961	1.36
Washington, D. C	342,776	1,638	7	4.778	.42
From 200,000 to 300,000 inhabitants:					
Denver, Colo	230,249	[2] 72	1	.313	1.39
Indianapolis, Ind	246,928	3,556	12	14.400	.33
Jersey City, N. J	281,497	650	.....	2.309	.....
Providence, R. I	235,222	492	77	2.091	15.65
Rochester, N. Y	230,414	[2] 2,002	28	8.694	1.39
St. Paul, Minn	266,300	282	1	1.058	.35
Seattle, Wash	277,420	474	.....	1.708	.....
From 100,000 to 200,000 inhabitants:					
Albany, N. Y	101,726	437	2	4.295	.45
Atlanta, Ga	167,041	.....	6	.....	.....
Birmingham, Ala	150,249	868	9	5.777	1.03
Bridgeport, Conn	108,999	64	4	.587	6.25
Cambridge, Mass	107,734	1,015	10	9.421	.98
Columbus, Ohio	193,822	1,118	23	5.768	2.05
Dayton, Ohio	120,364	643	7	5.342	1.08
Fall River, Mass	122,521	31	1	.253	3.22
Grand Rapids, Mich	118,163	117	.....	.990	.....
Hartford, Conn	103,177	[2] 663	12	6.425	1.81
Lowell, Mass	108,768	862	50	7.925	5.80
Nashville, Tenn	112,774	20	1	.177	5.00
Omaha, Nebr	128,912	26	.....	.201	.....
Richmond, Va	131,453	851	1	6.473	.12
Salt Lake City, Utah	101,207	1,074	2	10.611	.18
Spokane, Wash	120,994	1,133	6	9.364	.53
Syracuse, N. Y	143,602	605	7	4.213	1.15
Toledo, Ohio	176,798	1,350	27	7.635	2.00
Trenton, N.	102,071	59	7	.578	11.86
Worcester, Mass	152,150	405	17	2.661	4.19

MENINGITIS (EPIDEMIC CEREBROSPINAL).

Over 500,000 inhabitants:					
Boston, Mass	711,128	57	36	0.080	63.15
Chicago, Ill	2,294,711	[2] 49	40	.021	81.63
Cleveland, Ohio	596,970	31	30	.051	96.77
New York, N. Y	5,064,237	250	196	.049	78.40
Philadelphia, Pa	1,606,102	29	15	.018	51.72
St. Louis, Mo	712,027	[1] 61	[1] 40	.085	65.57
From 300,000 to 500,000 inhabitants:					
Cincinnati, Ohio	387,543	78	40	.201	51.28
Los Angeles, Cal	386,014	[2] 16	29	.....	.....
Milwaukee, Wis	400,279	.....	22	.....	.....
Newark, N. J	369,317	7	5	.018	71.42
New Orleans, La	350,695	63	44	.179	69.84
San Francisco, Cal	433,488	15	3	.034	20.00
Washington, D. C	342,776	7	4	.020	57.14
From 200,000 to 300,000 inhabitants:					
Denver, Colo	230,249	27	13	.117	48.14
Indianapolis, Ind	246,928	3	2	.012	66.66
Jersey City, N. J	281,497	9	.....	.031	.....
Providence, R. I	235,222	.....	11	.....	.....
Rochester, N. Y	230,414	11	9	.047	81.81

[1] From Apr. 1, 1912, to Mar. 31, 1913.
[2] The health officer states that cases are known not to be completely reported.

Reported Prevalence for the Year 1912 in Certain Cities—Continued.

MENINGITIS (EPIDEMIC CEREBROSPINAL)—Continued.

Cities.	Estimated population 1912.	Cases.	Deaths.	Case rate per 1,000 inhabitants.	Fatality rate per 100 cases.
From 100,000 to 200,000 inhabitants:					
Albany, N. Y.	101,726	1	1	0.009	100.00
Atlanta, Ga.	167,041	(1)	9	.....	.....
Birmingham, Ala.	150,249	8	13	.....	.....
Bridgeport, Conn.	108,999	[1] 9	12	.....	.....
Cambridge, Mass.	107,734	5	.....	.046	.....
Dayton, Ohio.	120,364	[1] 13	62	.....	.....
Fall River, Mass.	122,521	[1] 5	4	.041	80.00
Grand Rapids, Mich.	118,163	[1] 1	11	.....	.....
Lowell, Mass.	108,768	6	6	.055	100.00
Nashville, Tenn.	112,774	97	46	.860	47.42
Omaha, Nebr.	128,912	10	4	.077	40.00
Spokane, Wash.	120,994	7	.....	.057	.....
Syracuse, N. Y.	143,602	2	.....	.013	.....
Worcester, Mass.	152,150	11	8	.072	72.72

POLIOMYELITIS (INFANTILE PARALYSIS).

Over 500,000 inhabitants:					
Boston, Mass.	711,128	27	5	0.037	18.51
Chicago, Ill.	2,294,711	[1] 135	18	.058	13.33
Cleveland, Ohio.	596,970	113	.....	.189	.....
New York, N. Y.	5,064,237	504	70	.099	13.88
Philadelphia, Pa.	1,606,102	45	10	.028	22.22
St. Louis, Mo.	712,027	[2] 37	[2] 2	.051	5.40
From 300,000 to 500,000 inhabitants:					
Cincinnati, Ohio.	387,543	8	5	.020	62.50
Los Angeles, Cal.	386,014	256	49	.663	19.14
Milwaukee, Wis.	400,279	.....	5	.....	.....
Newark, N. J.	369,317	10	7	.027	70.00
New Orleans, La.	350,695	9	1	.025	11.11
San Francisco, Cal.	433,488	16	2	.036	12.50
Washington, D. C.	342,776	9	4	.026	44.44
From 200,000 to 300,000 inhabitants:					
Indianapolis, Ind.	246,928	10	3	.040	30.00
Providence, R. I.	235,222	4	1	.017	25.00
Rochester, N. Y.	230,414	18	3	.078	16.66
St. Paul, Minn.	266,300	.....	2	.....	.....
From 100,000 to 200,000 inhabitants:					
Albany, N. Y.	101,726	1	1	.009	100.00
Atlanta, Ga.	167,041	.....	.....	.....	.....
Birmingham, Ala.	150,249	7	2	.046	28.57
Bridgeport, Conn.	108,999	.....	2	.....	.....
Cambridge, Mass.	107,734	2	.....	.018	.....
Columbus, Ohio.	193,822	2	.....	.010	.....
Fall River, Mass.	122,521	2	.....	.016	.....
Grand Rapids, Mich.	118,163	7	1	.059	14.28
Lowell, Mass.	108,768	9	3	.082	33.33
Richmond, Va.	131,453	1	.....	.008	.....
Syracuse, N. Y.	143,602	2	.....	.014	.....
Worcester, Mass.	152,150	5	.....	.033	.....

SCARLET FEVER.

Over 500,000 inhabitants:					
Boston, Mass.	711,128	1,153	32	1.621	2.78
Chicago, Ill.	2,294,711	8,703	602	3.792	6.92
Cleveland, Ohio.	596,970	1,479	99	2.478	6.69
Detroit, Mich.	503,445	1,380	57	2.741	4.13
New York, N. Y.	5,064,237	12,716	615	2.511	4.84
Philadelphia, Pa.	1,606,102	2,872	113	1.788	3.93
St. Louis, Mo.	712,027	[2] 1,066	[2] 36	1.499	3.38
From 300,000 to 500,000 inhabitants:					
Cincinnati, Ohio.	387,543	922	38	2.382	4.12
Los Angeles, Cal.	386,014	450	6	1.166	1.33
Milwaukee, Wis.	400,279	1,022	57	2.553	5.58
Newark, N. J.	369,317	699	11	1.893	1.57
New Orleans, La.	350,695	352	12	1.004	3.41
San Francisco, Cal.	433,488	192	1	.443	.52
Washington, D. C.	342,776	259	4	.756	1.54

[1] The health officer states that cases are known not to be completely reported.
[2] From Apr. 1, 1912, to Mar. 31, 1913.

Reported Prevalence for the Year 1912 in Certain Cities—Continued.

SCARLET FEVER—Continued.

Cities.	Estimated population 1912.	Cases.	Deaths.	Case rate per 1,000 inhabitants.	Fatality rate per 100 cases.
From 200,000 to 300,000 inhabitants:					
Denver, Colo	230,249	440	18	1.911	4.09
Indianapolis, Ind	246,928	333	9	1.349	2.70
Jersey City, N. J	281,497	447	.....	1.588	.....
Providence, R. I	235,222	733	29	3.116	3.96
Rochester, N. Y	230,414	392	27	1.701	6.88
St. Paul, Minn	266,300	180	8	.676	4.44
Seattle, Wash	277,420	139	1	.501	.72
From 100,000 to 200,000 inhabitants:					
Albany, N. Y	101,726	26	.....	.256	.....
Atlanta, Ga	167,041	[1] 124	1	.742	.81
Birmingham, Ala	150,249	102	2	.679	1.61
Bridgeport, Conn	108,999	246	17	2.257	6.91
Cambridge, Mass	107,734	157	2	1.457	1.27
Columbus, Ohio	193,822	525	5	2.709	.95
Dayton, Ohio	120,364	83	2	.690	2.41
Fall River, Mass	122,521	156	7	1.273	4.49
Grand Rapids, Mich	118,163	146	1	1.236	.68
Hartford, Conn	103,177	392	21	3.799	5.36
Lowell, Mass	138,768	873	6	8.026	.69
Nashville, Tenn	112,774	115	1	1.020	.86
New Bedford, Mass	104,302	141	.....	1.352	.....
Omaha, Nebr	128,912	60	6	.466	10.00
Richmond, Va	131,453	326	1	2.480	.31
Salt Lake City, Utah	101,207	159	.....	1.572	.....
Spokane, Wash	120,994	93	2	.769	2.15
Syracuse, N. Y	143,602	613	9	4.269	1.47
Toledo, Ohio	176,798	344	17	1.946	4.95
Trenton, N. J	102,071	[1] 143	2	1.401	1.40
Worcester, Mass	152,150	329	11	2.163	3.34

SMALLPOX.

Over 500,000 inhabitants:					
Chicago, Ill	2,294,711	68	7	0.030	10.29
Cleveland, Ohio	596,970	11	1	.019	9.09
Detroit, Mich	503,445	209	.....	.415	.....
New York, N. Y	5,064,237	22	2	.004	9.09
Philadelphia, Pa	1,606,102	9	1	.006	11.11
St. Louis, Mo	712,027	[2] 33	.....	.046	.....
From 300,000 to 500,000 inhabitants:					
Cincinnati, Ohio	387,543	34	.....	.088	.....
Los Angeles, Cal	386,014	122	10	.316	8.20
Milwaukee, Wis	400,279	54	.....	.135	.....
Newark, N. J	369,317	4	.....	.011	.....
New Orleans, La	350,695	215	.....	.613	.....
San Francisco, Cal	433,488	106	1	.245	.95
Washington, D. C	342,776	9	.....	.026	.....
From 200,000 to 300,000 inhabitants:					
Denver, Colo	230,249	48	.....	.209	.....
Indianapolis, Ind	246,928	61	.....	.248	.....
Jersey City, N. J	281,497	1	.....	.004	.....
Rochester, N. Y	230,414	42	.....	.182	.....
St. Paul, Minn	266,300	636	1	2.388	.16
Seattle, Wash	277,420	26	.....	.094	.....
From 100,000 to 200,000 inhabitants:					
Atlanta, Ga	167,041	[1] 54	.....	.324	.....
Birmingham, Ala	150,249	79	.....	.526	.....
Columbus, Ohio	193,822	12	.....	.062	.....
Dayton, Ohio	120,364	152	.....	1.263	.....
Grand Rapids, Mich	118,163	1	.....	.009	.....
Nashville, Tenn	112,774	4	.....	.036	.....
Omaha, Nebr	128,912	26	.....	.202	.....
Richmond, Va	131,453	37	1	.282	2.70
Salt Lake City, Utah	101,207	885	1	8.745	.11
Spokane, Wash	120,994	283	.....	2.339	.....
Syracuse, N. Y	143,602	5	.....	.035	.....
Toledo, Ohio	176,798	76	.....	.430	.....

[1] The health officer states that cases are known not to be completely reported.
[2] From Apr. 1, 1912, to Mar. 31, 1913.

Reported Prevalence for the Year 1912 in Certain Cities—Continued.

TUBERCULOSIS.

Cities.	Estimated population 1912.	Cases.	Deaths.	Case rate per 1,000 inhabitants.	Fatality rate per 100 cases.
Over 500,000 inhabitants:					
Boston, Mass	711,128	3,322	1,093	4.671	32.90
Chicago, Ill	2,294,711	7,512	3,750	3.274	49.92
Cleveland, Ohio	596,970	1,430	792	2.395	55.39
Detroit, Mich	503,445	.....	491	.....	.....
New York, N. Y	5,064,237	22,752	8,591	4.493	37.76
Philadelphia, Pa	1,606,102	4,593	2,654	2.860	57.79
St. Louis, Mo	712,027	[1] 2,033	[1] 953	2.855	46.88
From 300,000 to 500,000 inhabitants:					
Cincinnati, Ohio	387,543	1,624	856	4.191	52.71
Los Angeles, Cal	386,014	1,486	937	3.850	63.06
Milwaukee, Wis	400,279	872	327	2.179	37.50
Newark, N. J	369,317	1,783	660	4.701	37.02
New Orleans, La	350,695	1,519	936	4.331	61.62
San Francisco, Cal	433,488	1,238	693	2.856	55.98
Washington, D. C	342,776	1,245	837	3.632	67.23
From 200,000 to 300,000 inhabitants:					
Denver, Colo	230,249	.....	593	.....	.....
Indianapolis, Ind	246,928	523	359	2.110	68.65
Jersey City, N. J	281,497	675	.....	2.398	.....
Providence, R. I	235,222	[2] 270	339	.....	.....
Rochester, N. Y	230,414	[2] 309	235	1.341	76.06
St. Paul, Minn	266,300	.....	288	.....	.....
Seattle, Wash	277,420	328	200	1.182	60.98
From 100,000 to 200,000 inhabitants:					
Albany, N. Y	101,726	368	228	3.618	61.96
Atlanta, Ga	167,041	.....	324	.....	.....
Birmingham, Ala	150,249	413	322	2.749	83.97
Bridgeport, Conn	108,999	174	107	1.597	61.50
Cambridge, Mass	107,734	273	162	2.534	59.35
Columbus, Ohio	193,822	332	281	1.713	84.64
Dayton, Ohio	120,364	[2] 35	166	.....	.....
Fall River, Mass	122,521	264	155	2.155	58.72
Grand Rapids, Mich	118,163	127	104	1.075	81.89
Hartford, Conn	103,177	252	70	2.443	27.78
Lowell, Mass	108,768	167	151	1.535	94.02
Nashville, Tenn	112,774	244	218	2.164	91.35
New Bedford, Mass	104,302	295	145	2.828	49.16
Omaha, Nebr	128,912	[2] 8	111	.....	.....
Richmond, Va	131,453	334	321	2.361	96.11
Scranton, Pa	135,894	[2] 72	62	.530	86.11
Spokane, Wash	120,994	[2] 72	62	.595	86.11
Syracuse, N. Y	143,602	235	140	1.637	59.58
Toledo, Ohio	176,798	[2] 78	260	.....	.....
Trenton, N. J	102,071	[2] 376	216	3.684	57.45
Worcester, Mass	152,150	301	150	1.978	49.83

TYPHOID FEVER.

Over 500,000 inhabitants:					
Boston, Mass	711,128	460	57	0.647	12.39
Chicago, Ill	2,294,711	1,051	173	.458	16.46
Cleveland, Ohio	596,970	271	38	.454	14.02
Detroit, Mich	503,445	.....	93	.....	.....
New York, N. Y	5,064,237	3,076	499	.607	16.22
Philadelphia, Pa	1,606,102	1,514	200	.942	13.21
St. Louis, Mo	712,027	[1] 511	[1] 75	.718	14.68
From 300,000 to 500,000 inhabitants:					
Cincinnati, Ohio	387,543	187	28	.483	14.98
Los Angeles, Cal	386,014	309	47	.800	15.21
Milwaukee, Wis	400,279	593	99	1.481	16.70
Newark, N. J	369,317	193	26	.523	13.48
New Orleans, La	350,695	261	49	.744	18.78
San Francisco, Cal	433,488	336	58	.775	17.26
Washington, D. C	342,776	585	78	1.707	13.33
From 200,000 to 300,000 inhabitants:					
Denver, Colo	230,249	498	30	2.163	6.02
Indianapolis, Ind	246,928	308	45	1.247	14.61
Jersey City, N. J	281,497	59	.....	.210	.....
Providence, R. I	235,222	206	24	.876	11.65
Rochester, N. Y	230,414	89	23	.386	25.84
St. Paul, Minn	266,300	[2] 124	23	.466	18.55
Seattle, Wash	277,420	149	20	.537	13.42

[1] From Apr. 1, 1912, to Mar. 31, 1913.
[2] The health officer states that cases are known not to be completely reported.

Reported Prevalence for the Year 1912 in Certain Cities—Continued.

TYPHOID FEVER—Continued.

Cities.	Estimated population 1912.	Cases.	Deaths.	Case rate per 1,000 inhabitants.	Fatality rate per 100 cases.
From 100,000 to 200,000 inhabitants:					
Albany, N. Y	101,726	70	18	.688	25.71
Atlanta, Ga	167,041	[1] 268	59	1.604	22.01
Birmingham, Ala	150,249	490	56	3.261	11.43
Bridgeport, Conn	108,999	58	8	.532	13.80
Cambridge, Mass	107,734	55	5	.511	9.09
Columbus, Ohio	193,822	272	39	1.403	14.34
Dayton, Ohio	120,364	56	22	.465	39.29
Fall River, Mass	122,521	101	22	.824	21.78
Grand Rapids, Mich	118,163	316	40	2.674	12.66
Hartford, Conn	103,177	76	4	.737	5.26
Lowell, Mass	108,768	86	10	.791	11.63
Nashville, Tenn	112,774	222	36	1.969	16.22
New Bedford, Mass	104,302	117	18	1.122	15.38
Omaha, Nebr	128,912	71	17	.551	23.94
Richmond, Va	131,453	208	22	1.582	10.58
Salt Lake City, Utah	101,207	163	17	1.611	10.43
Spokane, Wash	120,994	129	20	1.066	15.50
Syracuse, N. Y	143,602	[1] 92	24	.641	26.09
Toledo, Ohio	176,798	[1] 263	58	1.488	22.05
Trenton, N. J	102,071	109	20	1.068	18.35
Worcester, Mass	152,150	70	5	.460	7.14

LEPROSY.

Hartford, Conn	103,163	1			
Indianapolis, Ind	246,928	1	1		
Los Angeles, Cal	386,014	2	1		
New Bedford, Mass	104,302	2			
New Orleans, La	350,695	10			
New York, N. Y	5,064,237	2	1		
Providence, R. I	235,222	1			
San Francisco, Cal	433,488	2			
Spokane, Wash	120,994	1			

RABIES.

Chicago, Ill	2,294,711		8		
Cleveland, Ohio	596,970		2		
Columbus, Ohio	193,822	2			
Indianapolis, Ind	246,928		1		
Jersey City, N. J	281,497	1			
Los Angeles, Cal	386,014	1	1		
Nashville, Tenn	112,774	1			
Newark, N. J	389,317	2	2		
New Orleans, La	350,695		1		
New York, N. Y	5,064,237	4	5		
Philadelphia, Pa	1,606,102	1	1		
St. Louis, Mo	712,027	[2] 2	[2] 2		
San Francisco, Cal	433,488	6	6		

[1] The health officer states that cases are known not to be completely reported.
[2] From Apr. 1, 1912, to Mar. 31, 1913.

THE INFECTIOUS DISEASES

RECENT ADDITIONS TO OUR KNOWLEDGE OF THEIR ETIOLOGY[1]

By JOHN F. ANDERSON, Director, Hygienic Laboratory, United States Public Health Service.

Realizing how little time the general practitioner has to devote to reading the journals in which the results of experimental work are usually first reported, I have chosen for my subject a discussion of some recent additions to our knowledge of the etiology of the infectious diseases. Some of this work has been reported in publications not readily accessible and is of so great importance to all physicians, especially those in general practice and in public health work, that I am glad of this opportunity to review it.

These additions to our knowledge of the infectious diseases have been, up to the present time at least, of more practical value in the diagnosis and prevention of the particular diseases than in their cure. As general practitioners of medicine you are greatly interested in all advances that may assist you in diagnosis; and as the first to be aware of the presence in the community of infectious diseases you constitute the advance guard of your State health organization and are therefore concerned with methods of prevention.

It has not been many years since the aim of medical men, especially those in general practice, was to cure diseases while paying but slight attention to their prevention. But with the increase in our knowledge of the communicable diseases has come into practice a new branch of medical science, that of preventive medicine, and this has been recognized in our medical schools by the establishment of chairs of preventive medicine.

Our knowledge of the etiology of infectious diseases has advanced, not uniformly, but by leaps and bounds as new methods have been developed and new incentives have arisen. With the evolution of a bacteriological technic, led by Pasteur and Koch, there was, for a few years, a rapid expansion in our knowledge of bacterial infections. The discovery that Texas fever of cattle was transmitted by the tick started extensive studies in the relation of insects to the transmission of diseases. The demonstration that certain diseases are due to ultramicroscopic organisms—so-called "filterable viruses"—rapidly led to a study of many diseases of obscure etiology and cleared away much of the confusion in regard to them.

Again, great epidemics have furnished the incentive for the most exhaustive study of some of our essentially epidemic diseases, such as cholera, plague, influenza, meningitis, and poliomyelitis.

While very recent years have seen great advance in our knowledge of many of the phenomena of disease—in our understanding of its

[1] Address delivered before the Richmond Academy of Medicine and Surgery, Feb. 10, 1914.

physiology—there was a period not long since in which little was done to advance our knowledge of some important infectious diseases endemic almost throughout the civilized world, and research workers realized that new methods or agencies must be employed. As a result of the use of certain methods or agencies of research, the value of which had not been previously generally recognized or employed, there has been in the last few years a great increase in our knowledge of this class of diseases.

Along with these advances in our knowledge of those diseases considered for years as infectious has come the discovery that certain diseases formerly thought not to be communicable do after all belong to the infectious class. I refer especially to poliomyelitis, which for years was considered to be a degenerative disease of the nervous system, and which recent researches have proved to belong among the infectious diseases.

The use of the monkey as an experimental animal instead of the lower animals usually employed has contributed more than any other single factor to the important recent additions to our knowledge of the acute infections. Recent work has shown that the monkey is susceptible to a number of diseases that affect man and which are not readily or not at all transmissible to the small laboratory animals, such as rabbits, rats, and guinea pigs. We have thus been able to reproduce these diseases, and to study them under laboratory conditions.

Another important advance was in the adoption of methods of experiment by which the infective material was introduced into the body so that it was brought into immediate contact with the organs or tissues primarily and most seriously affected in the natural disease, as in experimental meningitis and poliomyelitis, where the infective material is put directly into the cranial or spinal cavities.

Other factors of value have been the recognition of the fact that the same disease may present a very different clinical picture in one species as compared with another, even to a difference in post-mortem findings, and yet be due to the same etiological agent. Filtration through earthenware filters, by means of which contaminating organisms are removed; greater experience in interpreting results; the training and development of men for research; the foundation and endowment of institutions for research, have all contributed to what we know of the communicable diseases.

After this somewhat general discussion of the factors contributing to advances in our knowledge of the communicable diseases, I shall now discuss briefly some recent work on certain of these diseases.

Poliomyelitis.

Students of the epidemiology of poliomyelitis had begun to realize that this disease belonged to the infectious class before Landsteiner and Popper in 1909 had shown for the first time that the disease could be transmitted to monkeys by inoculation with an emulsion of the spinal cord from a child who died on the fourth day of an attack of infantile paralysis. Since then, as the result of an immense amount of work done both in this country and abroad, many important facts have been discovered in regard to the nature of the virus and the channels by which it may enter and leave the body.

It has been shown that the disease may be transmitted by inoculation to monkeys and occasionally to rabbits. The disease belongs among the filterable viruses; that is, its virus is capable of passing through earthenware filters and is so minute that it probably can not be seen except by the use of special methods, even with the highest powers of the microscope. It has been shown that the virus is present in various organs of human beings dead from poliomyelitis and that the tonsils of monkeys five months after the acute stage of the disease still contain the infective agent. The same is probably true of human beings, and such persons might well become sources of infection.

Kling, Wernstedt, and Petterson have shown that poliomyelitis may be produced in monkeys by the inoculation of filtered washings from the mouth and nose, from the trachea, and from the small intestine, collected at autopsy from cases of infantile paralysis dying in the early stages of the disease.

Of special importance was their report that they had succeeded in demonstrating for the first time the virus of the disease in the buccal and intestinal secretions of persons who gave no history of recent illness, but who had come into intimate contact with other persons in their families sick with poliomyelitis. The opinion was expressed that such virus carriers were most likely very common during epidemics of poliomyelitis, probably exceeding the number of persons with clinically recognizable infections.

These findings would have almost justified the conclusion that the infection of poliomyelitis is disseminated by the transfer of the virus directly from person to person; but doubt was cast upon the validity of such a conclusion as a result of the report by Rosenau on the possible agency of the stable fly as a transmitter of the disease. Rosenau showed that in a certain proportion of cases the disease could be transmitted from sick to healthy monkeys by the bite of the stable fly. This work was partially corroborated by Anderson and Frost; but subsequent work by these latter investigators and by others have tended to show that probably the stable fly is not the usual factor by which the disease is transmitted.

The next important advance in our knowledge of the etiology of poliomyelitis was announced by Flexner and Noguchi, from the Rockefeller Institute. These workers showed that by employing special methods of culture they had been able to cultivate from the central nervous tissues of human beings and monkeys the subjects of acute poliomyelitis, a peculiar minute organism, and that with such cultures they had been able to produce the symptoms and lesions of poliomyelitis.

The microorganism described by these workers consists of globoid bodies of extremely small size arranged in pairs, chains, and masses, according to the conditions of growth and multiplication. They were unwilling to express themselves as to the place among living things to which the bodies belonged, but stated that the cultural conditions necessary are those applying more particularly to the bacteria. They were able to produce typical poliomyelitis in monkeys by inoculation with the twentieth generation of cultures from the originally infected animal.

We are still without definite knowledge as to the methods of spread and prevention of the disease.

Measles.

Measles may be said to be practically a world-wide disease, one that is always endemic and often epidemic, especially in our larger cities; but in spite of the toll in deaths that it yearly exacts, the large number of persons that it incapacitates for varying periods by illness, and the serious complications and sequelæ, measles is too often regarded by physicians and the laity as a necessary incident of childhood. The disease was the cause of 44,080 deaths in the registration area for deaths of the United States during the period 1900 to 1910. The number of deaths as compared with those of certain other diseases in the registration area for deaths during 1910 is shown in the following table:

Disease.	Deaths.	Deaths per 100,000 population.
Diphtheria and croup	11,512	21.4
Measles	6,598	12.3
Scarlet fever	6,255	11.6
Whooping cough	6,148	11.4
Cerebrospinal meningitis	2,272	4.2
Infantile paralysis	1,459	2.7

While it has been quite the general belief among clinicians for many years that the infective agent of measles is contained in the blood, in the nasal and buccal secretions, and perhaps in the "scales," the experimental data in support of this belief previous to 1911 were very incomplete.

But the work of Anderson and Goldberger on measles converted what had previously been opinions based on clinical observations into proven facts based on laboratory experiments. These authors showed that the monkey was susceptible to infection with measles by inoculation with blood from human cases of the disease. They showed that the apparent insusceptibility of the monkey to infection with measles was largely due to a limitation of the period of infectivity of the blood to the very early stages of the disease before or shortly after the appearance of the eruption. Thirty-six hours after the first appearance of the eruption the infectivity of the blood for the monkey becomes greatly lessened and rapidly decreases. Studies on the nature of the virus as it exists in the circulating blood showed that the infective agent is capable in a certain proportion of cases of passing through a Berkefeld filter and therefore is included among the filterable viruses.

Experiments made to test the infectivity of the nasal and buccal secretions from human cases of measles showed that such secretions, collected within the first 48 hours after the appearance of the eruption, were infective for monkeys by subcutaneous inoculation; this would correspond to about the fourth and sixth days of the disease.

Experiments made to determine the duration of the infectivity of these secretions strongly suggested a reduction if not a total loss of their infectivity with the approach of convalescence. Attempts were made, without success, to demonstrate the presence of the infective agent of measles in the "scales" collected from human cases of the disease from four to seven days after the appearance of the eruption.

Since the work of Anderson and Goldberger was reported, three papers by different workers have been published corroborating their results as to the presence of the virus in the blood of human cases and the susceptibility of the monkey to measles. Hektoen and Eggers, while chiefly concerned in their work on experimental measles in the monkey with a study of the leucocytes, state that the general results of their experiments agree very well with those reported by Anderson and Goldberger.

Nicolle and Conseil have reported the infection of the bonnet monkey with measles by the inoculation of blood drawn 24 hours before the appearance of the eruption. And more recently Lucas and Prizer have reported the observation of Koplik spots in monkeys experimentally infected with measles.

The results of these studies on measles give us our first definite information, based on carefully controlled laboratory experiments, as to the nature of the virus, its means of exit from the body and the probable avenue of infection. The experimental observations on the duration of infectivity of the secretions are in accord with previous

clinical observations, that cases of the disease are as a rule not infective after convalescence is well established. The great importance of having definitely determined this point, and the further one as to the noninfectivity of the "scales," from a public health aspect can readily be appreciated.

Scarlet Fever.

Scarlet fever and measles rank close together in our morbidity and mortality reports, and I shall now briefly refer to some recent investigations of scarlet fever which offer a hope that the discovery of the cause of this disease may not be far distant.

Early in 1911 Cantacuzéne and also Bernhardt reported independently the production of scarlet fever in the lower monkeys, using as a source of infection lymph glands, blood, pericardial fluid, and scrapings from the tongue of scarlet fever patients. Both authors claimed to have obtained in monkeys a febrile reaction, attended with an eruption, appearing after a variable incubation period and followed by desquamation of the skin.

Cantacuzéne did not mention any lesions of the throat, but was very positive in affirming that his monkeys were infected with scarlatina. Bernhardt claimed to have succeeded in transmitting the infection from monkey to monkey, but denied the specific relationship of the streptococcus and believed that the infective agent of scarlatina should be classed among the filterable viruses.

Just about the time that these observations were reported Landsteiner, Levaditi, and Prasek, in a preliminary note, reported some attempts on the transmission of scarlet fever to chimpanzees, and in a subsequent paper presented their work in detail. They endeavored to infect chimpanzees with scarlet fever by various methods of inoculation, using blood, emulsion of lymph glands, and deposits from the tonsils of cases of scarlet fever. In two out of four experiments the chimpanzees developed a reaction very striking in its resemblance to scarlet fever in the human being. In the other two chimpanzees the inoculations were followed only by angina without any cutaneous manifestations.

These experimental researches show that the inoculation of material from scarlet fever patients into monkeys is followed sometimes by a morbid syndrome which resembles more or less that of scarlet fever in human beings. Amongst the monkeys the anthropoids appear to present a susceptibility more constant than the lower monkeys.

The disease produced experimentally seems to be caused by the specific virus of scarlet fever, and the streptococcus does not appear to bear any etiological relationship to the disease. If we admit the scarlatinal nature of the infection, which to me appears very probable, it is then permissible to conclude that the virus of the disease exists in the deposits on the tonsils and tongue, in the blood, the lymphatic

nodes, and perhaps in the pericardial fluid. As to the nature of the etiological agent of scarlet fever we are still almost totally without knowledge. It is hoped that further experimental work will result in more definite knowledge as to the etiology and mode of transmission of the disease than that which we have already accumulated.

Typhoid Fever.

It has now been over 30 years since Eberth first described the *Bacillus typhosus*, and 30 years since Gaffky isolated the same organism in pure culture. But in spite of the fact that the study of the typhoid bacillus is a matter of almost universal practice in all laboratories and that many are engaged in clinical and epidemiological studies of the disease, experimental proof that the typhoid bacillus is the specific cause of this infection has been scant. In view of this apparent lack of advance there are many, even in this day, who question whether the bacillus described by Eberth is really the specific etiological agent of typhoid fever. Recently there has appeared work, the results of which show that this skepticism is not justified and that the typhoid bacillus is the specific etiological agent of typhoid fever.

Grunbaum in 1906 made attempts to infect chimpanzees with typhoid fever by feeding them pure cultures and also by feeding a portion of the stool from a case of typhoid fever; but his results, while very suggestive, were not conclusive.

In March, 1911, Metchnikoff and Besredka presented a paper on experimental typhoid fever in the chimpanzee, reporting work which is of so much interest and importance that I think a few words on it may not be without interest to you. Metchnikoff and Besredka, having in mind the history of hog cholera, instead of using pure cultures of the typhoid bacillus endeavored to infect a chimpanzee with the feces of a case of typhoid fever containing an abundance of typhoid bacilli. The chimpanzee, eight days after ingestion of the fecal material mixed with food, developed typhoid fever. The appearance of diarrhea, the presence of typhoid bacilli in the blood, and the development of specific agglutinins in the blood serum, left no doubt as to the result and clearly showed the susceptibility of the chimpanzee to infection with typhoid fever by feeding.

They were unable to either infect or vaccinate apes by the feeding and injection under the skin of the fluid obtained by the filtration of typhoid stools. From this the authors conclude that the typhoid bacillus, and not a filterable virus, is the etiological agent in typhoid fever. They found that the lower monkeys are only exceptionally susceptible to typhoid fever, and that rodents, such as the rabbit and guinea pig, are not at all susceptible to infection by feeding.

In the same paper, and also in a later one, they report attempts at protective inoculation by various means. They found that neither killed cultures nor their autolysates protected chimpanzees against infection with typhoid fever, but that vaccination with living cultures produced an immunity apparently as definite as from an attack of the disease. Vaccination with nonsensitized cultures produced an intense local and general reaction, while sensitized cultures caused only a feeble local and almost no general reaction; both appeared to confer equal immunity to infection. The work reported by Metchnikoff and Besredka fulfills for the first time the postulates of Koch as to the etiological relation of the *Bacillus typhosus* to typhoid fever, discredits the theory of a filterable virus in the disease, shows the possibility of absolute protection by vaccination with living cultures, and emphasizes the importance of not relying upon vaccination with killed cultures alone to the exclusion of all other precautionary measures.

Whooping Cough.

In 1900 Bordet and Gengou reported the observation, in sputum from whooping-cough cases, of a small bacillus, which was not obtained by them in pure culture until six years later, and gave certain reasons in support of their opinion that the bacillus discovered by them was the cause of whooping cough. Among these reasons was the fact that the bacillus described by them was found only in cases of whooping cough and was always present in the earliest stages of the disease; another reason being that it was found that the patient's blood serum contained an antibody, which was specific for this organism and which could be demonstrated by the complement fixation test.

More recently Mallory and his coworkers have confirmed and extended the findings of Bordet and Gengou in regard to the etiological relationship to whooping cough of the bacillus described by the former workers. Mallory and his associates have found that the primary single lesion in whooping cough consists of the presence of masses of minute bacilli between the cilia of the epithelial cells lining the trachea and bronchi. They consider that their action is chiefly mechanical by interfering with the normal movements of the cilia by causing them to stick together, and in this way furnishing a continual irritation, which results in the symptoms peculiar to the disease. They have been able, with sputum from cases of whooping cough and with pure cultures of an organism corresponding in every way with that described by Bordet and Gengou, to produce the same characteristic lesion in young animals and to obtain the organism again in pure culture from those animals.

They have therefore been able to fill the gaps which have heretofore existed, according to Koch's law, for the complete demon-

stration that the Bordet Gengou bacillus is the cause of whooping cough. They consider that the action of the bacilli in the respiratory tract would seem to be largely mechanical by their presence in such large numbers that they must interfere with the normal ciliary action and thus with the removal of secretion and of inhaled particles. At the same time, the organism probably produces a mild toxin, which is evidenced by the production of the well-recognized lymphocytosis, and by the production of an antibody which is found present in the blood.

The organism is most abundant and most easily demonstrated in the early stages of the disease. This corresponds with the clinical observation that the disease is most readily communicable at that time.

The disease is transmitted by the secretions from the mouth and throat, and is most infectious in the early stages.

Typhus Fever.

The last appearance of typhus fever in the United States in epidemic form was in New York in 1891–92. Since then, except for an occasional case at some of our large seaports, it has been believed that the disease had been eradicated from this country.

It has been a source of wonder to health authorities that, in spite of the occasional arrival in this country of immigrants sick with typhus and of many persons from endemic foci of the disease, typhus fever apparently did not gain a foothold in the United States. That this had already taken place has recently been shown through the demonstration by Anderson and Goldberger in the Hygienic Laboratory, United States Public Health Service, that a disease observed and studied in New York City by Dr. Nathan E. Brill is identical with typhus fever.

As far back as 1896 Dr. Brill began to notice from time to time among his typhoid cases types that were distinguishable from typhoid and paratyphoid fevers because of the short duration of the fever, the presence of a distinctive eruption, and the absence of specific agglutination reactions. He continued his observations on this type of fever and published two papers based on the study of 255 cases observed up to December, 1910.

About the time that Brill's second paper appeared, Anderson and Goldberger were engaged in the study of the typhus fever of Mexico and having the picture of that disease clearly in mind, were struck by the very marked clinical resemblance between it and the disease described by Brill. Influenced by this resemblance, they endeavored to see cases of Brill's disease in order to determine, if possible, the relationship between that infection and typhus fever.

Their efforts to do this were not successful until September, 1911, when they saw a well-marked case of Brill's disease in the wards of Mount Sinai Hospital, New York. Blood drawn from the arm vein of this patient was used for the inoculation of monkeys, one of which, nine days after inoculation, developed a fever, which reached its maximum six days later. The fever lasted for 11 days, when it terminated by rapid lysis. Blood was drawn from this animal at the height of its fever and successfully used for the inoculation of other monkeys. Monkeys that have recovered from one attack are immune to subsequent infection. Since then the infection has been carried through 22 monkey generations by inoculation of blood, and is now being continued by passage through guinea pigs.

Having established the susceptibility of the rhesus monkey to inoculation with defibrinated blood from cases of the disease described by Brill, it became important to determine the relationship of that disease to typhus fever, and for this purpose they proceeded to Mexico City, taking monkeys that had recovered from infection with the virus originally obtained from case No. 1 of Brill's disease, as well as fresh animals for controls.

Without going into the details of their tests, it is sufficient to state that it was found that an attack of Brill's disease confers immunity to subsequent infection with Mexican typhus and, conversely, that an attack of typhus confers immunity to subsequent infection with Brill's disease. To put it in a simpler way: Brill's disease, so called, and typhus fever are identical.

During the progress of the work necessary for the demonstration of the identity of the so-called Brill's disease and Mexican typhus, attention was given to various problems relative to the mode of transmission. It was found that the New York disease, as also the typhus of Mexico, may be transmitted from monkey to monkey by the bite of body lice that had been allowed to feed on monkeys sick with the disease. These results were in harmony with and confirm those previously reported by them and by others.

They were unable to transmit the disease by the bite of bedbugs or by the inoculation of the buccal and pharyngeal secretions from a human case of typhus. They were also convinced that the only way by which typhus is transmitted is by the bite of the body louse and possibly by that of the head louse.

Now that it is shown that typhus fever is identical with Brill's disease and that Brill's disease has been endemic in the city of New York for a great many years, there is good reason to believe that what is true of New York is true also of other large American and Canadian cities. In fact, since this first work appeared cases have been reported from several cities.

When one recalls how frequently the mild forms of even the familiar infectious diseases are overlooked, it need occasion no surprise that the benign form of a disease, usually thought of in our country as an exotic disease, or at least, perhaps, as a medical curiosity, should fail of recognition. That this is not applicable to typhus alone is strikingly shown by the history of pellagra and of hookworm disease in the United States.

I wish to point out that the recognition of these mild forms of typhus gives us a rational explanation of what Osler has well characterized as a "remarkable feature" of typhus, namely, the occurrence of a few cases at long intervals of time from any other outbreaks and at great distances from any known foci of the disease. In other words, these mild forms constitute the missing epidemiological link between so-called sporadic cases or outbreaks. In the propagation of typhus this mild form plays somewhat the same rôle that the "missed" or the "carrier" cases do in such diseases as diphtheria and typhoid.

The demonstration of the endemic presence of typhus fever in the United States requires the American sanitarian to recognize the existence of a problem of which he has heretofore been unaware, and to be on his guard against a disease that presumably may at any time assume epidemic prevalence and virulence.

Future advances in our knowledge of the acute infections would seem to depend to a large extent upon the discovery of new methods of staining the etiological agent and of new methods of culture.

It is a singular and regretable fact that in spite of the large and important additions to our knowledge of the cause and means of transmission of many of the communicable diseases the application of this knowledge in the control and eradication of the diseases has not kept pace with its acquisition. With a few notable exceptions, such as the control of yellow fever through mosquito eradication and of bubonic plague by rat campaigns, health authorities have been slow to apply the great mass of information now available to them by reason of the researches of the last few years.

It would seem that what is most needed at the present time is not so much more research, but a more general application of the results already at hand. Research should of course be encouraged and developed; the laity, physicians, and health officers should be impressed with the importance of using the information already available, and very important it is that our lawmakers should also be made to see that it requires money to carry out the measures for the control of diseases along the lines which have been pointed out so convincingly by laboratory studies.

PREVALENCE OF DISEASE.

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring.

IN CERTAIN STATES AND CITIES.

SMALLPOX.

California—Angel Island Quarantine.

Asst. Surg. Thometz, of the Public Health Service, reported by telegraph that on March 29, 1914, a case of smallpox, in a Chinese steerage passenger, had been removed from the steamship *Siberia*.

California—Oakland and San Francisco.

Surg. Long, of the Public Health Service, reported by telegraph that during the week ended March 28, 1914, two cases of smallpox had been notified in Oakland and seven cases in San Francisco, Cal.

Indiana—Evansville.

Surg. Oakley, of the Public Health Service, reported by telegraph that during the week ended March 28, 1914, 14 cases of smallpox had been notified in Evansville, Ind.

Maryland—Baltimore.

Senior Surg. Carter, of the Public Health Service, reported by telegraph that during the week ended March 27, 1914, 24 cases of smallpox had been notified in Baltimore, Md., making a total of 196 cases reported since January 11, 1914.

Maryland—Bladensburg.

The State Board of Health of Maryland reported by telegraph March 30, 1914, that 2 cases of smallpox had been notified at Bladensburg, Prince George County, Md.

Maryland—Chestertown.

The State Board of Health of Maryland reported by telegraph, March 31, 1914, that one case of smallpox had been notified at Chestertown, Kent County, Md.

SMALLPOX—Continued.

Minnesota—Duluth.

Acting Asst. Surg. Cheney, of the Public Health Service, reported by telegraph that during the week ended March 28, 1914, five cases of smallpox had been notified in Duluth, Minn.

New York—Niagara Falls—Epidemic Ended.

Acting Asst. Surg. Bingham, of the Public Health Service, reported, March 28, 1914, that the recent epidemic of smallpox at Niagara Falls, N. Y., was at an end. From November 3, 1913, to March 11, 1914, 458 cases with 1 death were notified to the local health office.

Texas—Galveston.

Surg. Bahrenburg, of the Public Health Service, reported by telegraph that during the week ended March 27, 1914, 15 cases of smallpox had been notified in Galveston, Tex., making a total of 42 cases reported since February 6, 1914.

State Reports for February, 1914.

Places.	Number of new cases reported during month.	Deaths.	Vaccination history of cases.			
			Number vaccinated within 7 years preceding attack.	Number last vaccinated more than 7 years preceding attack.	Number never successfully vaccinated.	Vaccination history not obtained or uncertain.
California:						
Alameda County	2				2	
Oakland	4				2	2
Butte County	2					2
Colusa County	1					1
Fresno County	10					10
Clovis	1				1	
Humboldt County—						
Eureka	1					1
Imperial County	3				2	1
Kern County	2				2	
Bakersfield	1					1
Kings County	6				1	
Lake County	1					1
Lakeport	6			2	4	
Los Angeles County—						
Lordsburg	1					1
Los Angeles	3				2	1
Monrovia	2					2
Mendocino County	15				15	
Monterey County	1					1
Monterey	2				2	
Nevada County—						
Grass Valley	2				1	1
Nevada City	1					1
Placer County—						
Auburn	1					1
Sacramento County—						
Sacramento	2			1	1	
San Diego County—						
San Diego	2					2
San Joaquin County—						
Stockton	4				2	2
San Mateo County—						
South San Francisco	3					3

SMALLPOX—Continued.

State Reports for February, 1914—Continued.

Places.	Number of new cases reported during month.	Deaths.	Vaccination history of cases.			
			Number vaccinated within 7 years preceding attack.	Number last vaccinated more than 7 years preceding attack.	Number never successfully vaccinated.	Vaccination history not obtained or uncertain.
California—Continued.						
San Francisco County—						
San Francisco	12					12
Santa Clara County	11			4	6	1
San Jose	1					1
Santa Cruz County	1			1		
Boulder Creek	4		1		3	
Santa Cruz	2					2
Stanislaus County	3		1	1	1	
Total	113		2	9	47	55
New York:						
Chautauqua County	65		4	3	43	15
Clinton County	1				1	
Erie County	18				16	2
Franklin County	1		1			
Hamilton County	1					1
Herkimer County	7			1	6	
Niagara County	151		12	1	108	30
Orleans County	2				2	
Steuben County	2				2	
Sullivan County	1			1		
New York City	2					2
Total	251		[1] 17	6	178	50

[1] 15 of these were vaccinated during the month of February, 1914.

Miscellaneous State Reports.

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Iowa (Feb. 1-28):			Iowa (Feb. 1-28)—Continued.		
Counties—			Counties—Continued.		
Adair	2		Lyon	6	
Audubon	1		Madison	1	
Benton	8		Mahaska	6	
Boone	31		Marion	13	
Buchanan	1		Monona	8	
Buena Vista	3		Monroe	8	
Cerro Gordo	6		Muscatine	34	
Clay	3		Palo Alto	3	
Clayton	1		Polk	151	
Crawford	4		Ringgold	1	
Dallas	3		Scott	6	
Davis	7		Shelby	3	
Dickinson	2		Sioux	9	
Dubuque	5		Story	7	
Emmet	5		Union	7	
Fayette	1		Wapello	1	
Franklin	4		Warren	1	
Grundy	16		Washington	9	
Guthrie	1		Webster	1	
Hardin	1		Total	481	
Harrison	7				
Henry	6				
Humboldt	1		North Dakota (Feb. 1-28):		
Jasper	40		Counties—		
Jefferson	1		Cass	3	
Johnson	4		Cavalier	3	
Keokuk	20		Dickey	1	
Lee	10		Dunn	5	
Linn	6		Grand Forks	1	
Louisa	6		Kidder	6	

SMALLPOX—Continued.

Miscellaneous State Reports—Continued.

Places.	Cases.	Deaths.
North Dakota (Feb. 1-28)—Continued.		
Counties—Continued.		
McHenry	2	.....
McLean	1	.....
Pierce	10	.....
Ramsey	4	.....
Renville	1	.....
Rolette	11	.....
Sargent	1	.....
Ward	2	.....
Wells	12	.....
Williams	1	.....
Total	64	.....
Virginia (Feb. 1-28):		
Counties—		
Appomattox	5	.....
Amherst	4	.....
Alexandria	3	.....
Brunswick	10	.....
Buckingham	10	.....
Bedford	19	.....
Campbell	14	.....
Charlotte	2	.....
Craig	9	.....
Fairfax	3	.....
Fauquier	1	.....
Franklin	1	.....
Frederick	1	.....
Greenville	4	.....
Halifax	17	.....
Henry	3	.....
Isle of Wight	47	.....
Mecklenburg	5	.....
Montgomery	10	.....
Nansemond	23	.....
New Kent	1	.....
Norfolk	9	.....
Nottoway	3	.....
Pittsylvania	8	.....
Prince Edward	7	.....
Prince George	2	.....
Prince William	1	.....
Princess Anne	15	.....
Pulaski	2	.....
Roanoke	9	.....
Rockingham	1	.....
Scott	10	.....
Shenandoah	52	.....
Southampton	46	.....
Surry	7	.....
Sussex	4	.....
Warwick	1	.....
Warren	1	.....
Washington	61	.....
Wythe	2	.....
Total	433	.....
Vermont (Feb 1-28).[1]		

[1] No case.

City Reports for Week Ended Mar. 14, 1914.

Places.	Cases.	Deaths.
Altoona, Pa	2	.....
Atlantic City, N. J	1	.....
Baltimore, Md	34	.....
Boston, Mass	1	.....
Chicago, Ill	3	.....
Cincinnati, Ohio	2	.....
Cleveland, Ohio	1	.....
Coffeyville, Kans	2	.....
Columbus, Ohio	5	.....
Detroit, Mich	8	.....
Evansville, Ind	11	.....
Kansas City, Kans	17	.....
Kansas City, Mo	20	.....
Knoxville, Tenn	13	.....
La Crosse, Wis	3	.....
Lexington, Ky	1	.....
Lynchburg, Va	6	.....
Massillon, Ohio	2	.....
Milwaukee, Wis	34	.....
Muscatine, Iowa	51	.....
Nashville, Tenn	21	.....
New Orleans, La	1	.....
Niagara Falls, N. Y	6	.....
Norristown, Pa	3	.....
Philadelphia, Pa	1	.....
Portland, Oreg	2	.....
Portsmouth, Va	1	.....
Racine, Wis	2	.....
Richmond, Va	2	.....
Roanoke, Va	2	.....
St. Louis, Mo	6	.....
San Francisco, Cal	1	.....
Seattle, Wash	5	.....
Spokane, Wash	5	.....
Superior, Wis	1	.....
Toledo, Ohio	27	.....
Zanesville, Ohio	1	.....

TYPHOID FEVER.

State Reports for February, 1914.

Places.	Number of new cases reported during month.
California:	
Alameda County—	
Alameda	5
Berkeley	3
Oakland	8
Butte County	1
Colusa County	1
Contra Costa County—	
Pittsburg	1
Richmond	1
Fresno County—	
Clovis	1
Humboldt County—	
Arcata	1
Imperial County	5
Calexico	3
Kern County—	
Bakersfield	1
Lassen County	1
Los Angeles County—	
Los Angeles	36
Marin County—	
Belvedere	1
Modoc County	1
Riverside County—	
Riverside	2
Sacramento County—	
Sacramento	27
San Bernardino County	1
San Diego County—	
San Diego	3
San Francisco County—	
San Francisco	30
San Mateo County—	
San Mateo	1
Santa Barbara County—	
Santa Maria	1
Santa Clara County	1
Santa Cruz County—	
Watsonville	1
Shasta County—	
Redding	2
Yolo County	1
Total	140
Hawaii:	
Hawaii—	
Hamakua district	5
Hilo	1
North Hilo district	1
North Kohala district	1
Puna district	1
South Hilo district	2
South Kona district	1
Maui—	
Puunene and Kihei districts	3
Oahu—	
Honolulu	4
Koolauloa district	1
Total	20
New York:	
Albany County	18
Broome County	6
Cattaraugus County	3
Cayuga County	1
Chemung County	8
Columbia County	1
Erie County	20
Franklin County	1
Fulton County	1
Genesee County	1
Greene County	1

Places.	Number of new cases reported during month.
New York—Continued.	
Jefferson County	3
Montgomery County	1
Niagara County	4
Oneida County	1
Onondaga County	4
Orange County	5
Orleans County	1
Putnam County	2
Rensselaer County	4
St. Lawrence County	5
Schenectady County	1
Schoharie County	1
Seneca County	3
Steuben County	6
Sullivan County	1
Tioga County	1
Tompkins County	4
Ulster County	1
Warren County	2
Washington County	3
Wayne County	1
Westchester County	3
Yates County	2
New York City	75
Total	195
North Dakota:	
Billings County	2
Bowman County	1
Burleigh County	2
Logan County	2
Nelson County	1
Pierce County	2
Ramsey County	1
Ward County	1
Williams County	1
Total	13
Vermont:	
Addison County	5
Bennington County	2
Franklin County	4
Grand Isle County	1
Lamoille County	1
Rutland County	1
Washington County	1
Windham County	3
Total	18
Virginia:	
Accomac County	1
Alleghany County	2
Amherst County	1
Augusta County	2
Bedford County	2
Botetourt County	1
Brunswick County	1
Buchanan County	1
Buckingham County	1
Campbell County	4
Carroll County	4
Cumberland County	1
Elizabeth City County	1
Essex County	1
Floyd County	5
Fluvanna County	1
Franklin County	1
Goochland County	2
Grayson County	1
Greensville County	1
Halifax County	9

TYPHOID FEVER—Continued.

State Reports for February, 1914—Continued.

Places.	Number of new cases reported during month.	Places.	Number of new cases reported during month.
Virginia—Continued.		Virginia—Continued.	
Hanover County	3	Rockingham County	2
Henrico County	7	Russell County	2
Henry County	1	Scott County	4
Isle of Wight County	1	Smyth County	1
Loudoun County	2	Southampton County	1
Lunenburg County	2	Sussex County	3
Mecklenburg County	1	Tazewell County	8
Montgomery County	10	Warren County	1
Norfolk County	1	Washington County	3
Nottoway County	1	Wise County	6
Pittsylvania County	2	Wythe County	4
Powhatan County	1	York County	1
Princess Anne County	1		
Roanoke County	2	Total	116
Rockbridge County	2		

City Reports for Week Ended Mar. 14, 1914.

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Alameda, Cal.	1	1	Milwaukee, Wis.	2	.....
Ann Arbor, Mich.	2	.....	Morristown, N. J.	1	.....
Baltimore, Md.	1	2	Nashville, Tenn.	4	1
Beaver Falls, Pa.	1	.....	Newark, N. J.	1	.....
Bennington, Vt.	1	.....	Newburyport, Mass.	1	.....
Boston, Mass.	5	2	New Orleans, La.	3	.....
Buffalo, N. Y.	10	2	Niagara Falls, N. Y.	2	.....
Chicago, Ill.	11	3	Norristown, Pa.	1	.....
Cincinnati, Ohio.	3	.....	Oakland, Cal.	1	1
Cleveland, Ohio.	2	3	Philadelphia, Pa.	5	3
Columbus, Ohio.	2	.....	Plainfield, N. J.	1	.....
Cumberland, Md.	.....	2	Portland, Me.	1	.....
Dayton, Ohio.	1	.....	Providence, R. I.	1	1
Dunkirk, N. Y.	3	.....	Reading, Pa.	1	1
Elmira, N. Y.	2	.....	Richmond, Va.	1	1
Erie, Pa.	1	.....	Sacramento, Cal.	1	.....
Fall River, Mass.	1	.....	Saginaw, Mich.	2	.....
Grand Rapids, Mich.	4	3	St. Louis, Mo.	4	1
Hartford, Conn.	1	.....	San Francisco, Cal.	13	3
Kansas City, Mo.	2	2	Seattle, Wash.	2	.....
Lancaster, Pa.	1	.....	Spokane, Wash.	1	.....
Lawrence, Mass.	.....	1	Springfield, Ill.	4	.....
Little Rock, Ark.	1	.....	Springfield, Mass.	.....	7
Los Angeles, Cal.	5	1	Trenton, N. J.	2	.....
Lowell, Mass.	4	.....	Washington, D. C.	2	.....
Lynn, Mass.	1	.....	Wilmington, N. C.	1	.....
Medford, Mass.	1	.....	Yonkers, N. Y.	2	1

CEREBROSPINAL MENINGITIS.

State Reports for February, 1914.

Places.	Number of new cases reported during month.
California:	
Alameda County—	
Albany	1
Monterey County—	
Salinas	1
Los Angeles County—	
Los Angeles	3
San Diego County—	
San Diego	1
Shasta County—	
Kennett	1
San Francisco County—	
San Francisco	2
Total	9
Hawaii:	
Oahu—	
Ewa district	1
Honolulu	3
Total	4
Iowa:	
Fremont County	1
Worth County	1
Total	2
New York:	
Erie County	3
Montgomery County	1
Oswego County	1
Tompkins County	1
Warren County	1
Westchester County	2
Wyoming County	1
New York City	22
Total	32

City Reports for Week Ended Mar. 14, 1914.

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Chicago, Ill	4		Newark, N. J	1	1
Cleveland, Ohio		1	Richmond, Va		2
Columbus, Ohio		1	St. Louis, Mo	2	
Kansas City, Mo	1		San Francisco, Cal	2	1
Jersey City, N. J	1		Washington, D. C	1	1
Los Angeles, Cal	3	4	West Hoboken, N. J	1	
Lowell, Mass	1				

POLIOMYELITIS (INFANTILE PARALYSIS).

State Reports for February, 1914.

Places.	Number of new cases reported during month.
California:	
Humboldt County—	
Ferndale	1
Los Angeles County—	
Los Angeles	1
Tehema County	1
Total	3
Hawaii:	
Oahu—	
Honolulu	1
New York:	
Nassau County	1
Schenectady County	1
New York—Continued.	
Westchester County	1
New York City	11
Total	14
Virginia:	
Albemarle County	1
Halifax County	1
James City County	1
King and Queen County	1
Montgomery County	3
Orange County	2
Prince Edward County	1
Wythe County	1
Total	11

POLIOMYELITIS (INFANTILE PARALYSIS)—Continued.

City Reports for Week Ended Mar. 14, 1914.

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Buffalo, N. Y.	1	1	Newark, N. J.	1	.....
Chicago, Ill.	1	.....	Oakland, Cal.	1	.....
Fall River, Mass.	1	.....	Worcester, Mass.	1	.....

ERYSIPELAS.

City Reports for Week Ended Mar. 14, 1914.

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Baltimore, Md.	.....	1	Harrisburg, Pa.	4	.....
Binghamton, N. Y.	3	.....	Los Angeles, Cal.	2	.....
Boston, Mass.	.....	3	Nanticoke, Pa.	1	.....
Buffalo, N. Y.	10	1	Rutland, Vt.	1	.....
Chicago, Ill.	29	2	St. Louis, Mo.	7	.....
Cincinnati, Ohio.	3	.....	San Francisco, Cal.	1	1
Cleveland, Ohio.	7	1	Schenectady, N. Y.	.....	1
Dayton, Ohio.	.....	1	Toledo, Ohio.	.....	2
Detroit, Mich.	.....	1	Wilkes-Barre, Pa.	1	.....

LEPROSY.

California—Oakland.

Surg. Long, of the Public Health Service, reported by telegraph that during the week ended March 28, 1914, 1 case of leprosy had been notified in Oakland, Cal.

Hawaii Report for February, 1914.

The Territorial Board of Health of Hawaii reported that during the month of February, 1914, 14 cases of leprosy had been notified in the Territory of Hawaii.

Washington—Winlock.

The State Board of Health of Washington reported that a case of leprosy had been notified in Winlock, Lewis County, Wash., in the person of C. K., a native of Finland, aged 57 years, male, who had lived at Winlock for 9 years, and previously in Point Arenas, Cal., and in Cameron and Rock Springs, Wyo. The disease was diagnosed clinically March 13 and verified bacteriologically March 15, 1914. The type of the disease is tubercular, in advanced stage, and the patient is under the supervision of the Lewis County Board of Health.

PELLAGRA.

During the week ended March 14, 1914, pellagra was notified by cities as follows: Nashville, Tenn., 1 case; Richmond, Va., 1 death; St. Joseph, Mo., 1 death.

PLAGUE.

California—Squirrels Collected and Examined.

During the week ended March 14, 1914, 4 ground squirrels from Alameda County were examined for plague infection. No plague-infected squirrel was found.

Maintenance of a Squirrel-Free Zone.

During the week ended March 14, 1914, 59 acres of land in Alameda County and 197 in Stanislaus County were treated with squirrel destructors. In Alameda County 10 acres were covered with poisoned grain.

Rats Collected and Examined.

Places.	Week ended—	Found dead.	Total collected.	Examined.	Found infected.
California:					
Cities—					
Oakland	Mar. 14, 1914	43	553	415	.....
Berkeley	....do.....	1	159	109	.....
San Francisco	....do.....	12	1,365	1,076	.....

PNEUMONIA.

City Reports for Week Ended Mar. 14, 1914.

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Auburn, N. Y	8	1	Marinette, Wis	1	1
Bennington, Vt	1	.....	Muncie, Ind	2	2
Binghamton, N. Y	6	5	New Castle, Pa	2	.....
Braddock, Pa	1	.....	Philadelphia, Pa	53	106
Chicago, Ill	191	143	Pittsburgh, Pa	42	60
Cleveland, Ohio	38	17	Pittsfield, Mass	1	.....
Coffeyville, Kans	1	.....	Reading, Pa	3	5
Dunkirk, N. Y	2	.....	Rochester, N. Y	10	12
Erie, Pa	1	.....	San Diego, Cal	2	2
Galesburg, Ill	3	3	Saratoga Springs, N. Y	2	.....
Grand Rapids, Mich	2	1	Schenectady, N. Y	5	4
Harrisburg, Pa	1	3	South Bethlehem, Pa	5	3
Kansas City, Kans	5	7	South Omaha, Nebr	3	.....
La Crosse, Wis	1	.....	Wilkes-Barre, Pa	1	2
Los Angeles, Cal	19	9	Wilkinsburg, Pa	2	3
Manchester, N. H	1	1			

RABIES.

California—Oakland.

Surg. Long, of the Public Health Service, reported by telegraph that during the week ended March 28, 1914, 1 fatal case of rabies had been notified in Oakland, Cal.

California—San Francisco—Rabies in Animals.

Surg. Long, of the Public Health Service, reported by telegraph that during the week ended March 28, 1914, 1 case of rabies in a dog had been reported in San Francisco, Cal.

RABIES—Continued.

Washington—Seattle—Rabies in Animals.

Surg. Lloyd, of the Public Health Service, reported by telegraph that during the week ended March 28, 1914, 8 cases of rabies in dogs had been reported in Seattle, Wash.

ROCKY MOUNTAIN SPOTTED (OR TICK) FEVER.

Washington—Odessa.

The State Board of Health of Washington reported by telegraph March 30, 1914, that a case of Rocky Mountain spotted (or tick) fever had been notified in Odessa, Lincoln County, Wash.

TETANUS.

During the week ended March 14, 1914, tetanus was notified by cities as follows: Baltimore, Md., 1 death; Philadelphia, Pa., 2 deaths; Richmond, Va., 2 deaths; San Francisco, Cal., 1 death.

SCARLET FEVER, MEASLES, DIPHTHERIA, AND TUBERCULOSIS.

Pittsburgh, Pa.—Scarlet Fever.

Surg. Stoner, of the Public Health Service, reported by telegraph that during the week ended March 28, 1914, 96 cases of scarlet fever, with 7 deaths, had been notified in Pittsburgh, Pa., making a total of 2,814 cases, with 139 deaths, reported since August 1, 1913.

State Reports for February, 1914.

State.	Cases.		
	Scarlet fever.	Measles.	Diphtheria.
California	260	174	153
Hawaii	.....	1	16
Iowa	127	.....	75
New York	2,072	5,260	2,125
North Dakota	75	115	26
Vermont	27	68	11

City Reports for Week Ended Mar. 14, 1914.

Cities.	Population, United States census 1910.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Over 500,000 inhabitants:										
Baltimore, Md.	558,485	233	24	.....	14	.....	18	.....	19	26
Boston, Mass.	670,585	242	67	1	53	.....	157	2	41	16
Chicago, Ill.	2,185,283	743	165	15	102	3	125	9	230	80
Cleveland, Ohio	560,663	178	29	3	23	2	23	.....	43	15
Philadelphia, Pa.	1,549,008	661	57	13	468	1	65	4	92	60
Pittsburgh, Pa.	533,905	209	22	1	38	.....	131	6	31	19
St. Louis, Mo.	687,029	277	52	4	123	.....	51	7	46	22

SCARLET FEVER, MEASLES, DIPHTHERIA, AND TUBERCULOSIS—Contd.

City Reports for Week Ended Mar. 14, 1914—Continued.

Cities.	Population, United States census 1910.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
From 300,000 to 500,000 inhabitants:										
Buffalo, N. Y.	423,715	203	26	1	26	2	16	1	37	17
Cincinnati, Ohio	364,463	148	17	1	3	.....	13	1	21	18
Detroit, Mich.	465,766	202	31	3	.....	1	35	2	.....	21
Los Angeles, Cal.	319,198	135	9	1	5	.....	20	.....	65	24
Milwaukee, Wis.	373,857	125	24	4	70	1	49	4	19	6
Newark, N. J.	347,469	132	29	2	314	1	57	.....	35	11
New Orleans, La.	339,075	153	27	5	19	.....	10	.....	32	21
San Francisco, Cal.	416,912	143	3	.....	70	1	12	.....	28	.....
Washington, D. C.	331,069	141	11	1	73	.....	8	.....	29	14
From 200,000 to 300,000 inhabitants:										
Jersey City, N. J.	267,779	102	10	1	8	.....	13	.....	13	11
Kansas City, Mo.	248,381	79	4	.....	10	.....	5	.....	8	7
Portland, Oreg.	207,214	.....	3	.....	91	.....	3	.....	3	.....
Providence, R. I.	224,326	79	17	3	11	1	11	.....	7	6
Rochester, N. Y.	218,149	65	4	2	15	1	5	1	.....	6
Seattle, Wash.	237,194	44	4	.....	8	.....	3	.....	15	7
From 100,000 to 200,000 inhabitants:										
Bridgeport, Conn.	102,054	39	3	1	17	1	9	.....	6	1
Cambridge, Mass.	104,839	37	5	.....	29	.....	14	.....	8	3
Columbus, Ohio	181,548	79	4	.....	24	.....	4	.....	18	10
Dayton, Ohio	116,577	40	13	.....	59	.....	7	.....	.....	5
Fall River, Mass.	119,295	40	4	1	3	.....	9	1	9	2
Grand Rapids, Mich.	112,571	40	1	.....	51	.....	10	1	3	.....
Lowell, Mass.	106,294	38	6	1	26	1	3	.....	2	5
Nashville, Tenn.	110,364	62	1	.....	.....	.....	.....	.....	8	5
Oakland, Cal.	150,174	42	3	1	.....	.....	1	.....	.....	4
Richmond, Va.	127,628	56	1	.....	7	.....	8	.....	8	7
Spokane, Wash.	104,402	.....	.....	.....	32	.....	1	.....	2	2
Toledo, Ohio	168,497	53	4	.....	1	1	6	.....	.....	15
Worcester, Mass.	145,986	39	2	.....	9	.....	5	1	2	3
From 50,000 to 100,000 inhabitants:										
Altoona, Pa.	52,127	10	.....	.....	.....	.....	1	.....	.....	1
Bayonne, N. J.	55,545	16	.....	.....	17	.....	2	.....	3	1
Brockton, Mass.	56,878	21	4	.....	12	.....	8	.....	5	.....
Camden, N. J.	94,538	.....	4	.....	6	.....	4	.....	14	.....
Erie, Pa.	66,525	28	5	.....	4	.....	2	.....	11	.....
Evansville, Ind.	69,647	20	.....	.....	1	.....	1	.....	.....	1
Harrisburg, Pa.	64,186	22	1	.....	16	.....	.....	.....	.....	.....
Hartford, Conn.	98,915	41	11	.....	17	.....	9	.....	5	2
Hoboken, N. J.	70,324	.....	4	1	33	.....	8	.....	20	4
Johnstown, Pa.	55,482	23	6	3	5	.....	3	.....	.....	.....
Kansas City, Kans.	82,331	.....	1	.....	.....	.....	7	.....	1	.....
Lawrence, Mass.	85,892	.....	5	.....	.....	.....	3	.....	4	.....
Lynn, Mass.	89,336	29	7	1	1	.....	14	.....	2	1
Manchester, N. H.	70,063	28	2	.....	4	.....	7	.....	1	1
New Bedford, Mass.	96,652	31	.....	.....	.....	.....	7	.....	13	3
Passaic, N. J.	54,773	13	1	.....	10	.....	5	.....	1	.....
Pawtucket, R. I.	51,622	8	1	1	.....	.....	3	.....	.....	4
Portland, Me.	58,571	20	1	.....	.....	.....	4	.....	.....	1
Reading, Pa.	96,071	36	3	.....	3	.....	12	.....	13	2
Saginaw, Mich.	50,510	15	3	.....	.....	.....	1	.....	.....	1
St. Joseph, Mo.	77,403	22	3	.....	2	.....	.....	.....	3	1
Schenectady, N. Y.	72,826	22	1	.....	2	.....	9	.....	3	.....
South Bend, Ind.	53,684	13	2	.....	3	.....	1	.....	.....	.....
Springfield, Ill.	51,678	26	3	.....	1	.....	.....	.....	.....	2
Springfield, Mass.	88,926	38	3	1	3	.....	3	.....	6	.....
Trenton, N. J.	96,815	66	3	2	2	.....	18	2	10	6
Wilkes-Barre, Pa.	67,105	20	5	.....	60	.....	7	.....	4	.....
Yonkers, N. Y.	79,803	29	2	.....	18	.....	8	.....	3	2
From 25,000 to 50,000 inhabitants:										
Atlantic City, N. J.	46,150	4	1	.....	2	.....	2	.....	.....	.....
Auburn, N. Y.	34,668	9	.....	.....	11	.....	4	1	.....	.....
Aurora, Ill.	29,807	10	3	.....	.....	.....	2	.....	.....	1
Austin, Tex.	29,860	13	1	.....	.....	.....	.....	.....	.....	1
Binghamton, N. Y.	48,443	22	.....	.....	108	.....	2	1	6	6
Brookline, Mass.	27,792	4	1	.....	3	.....	3	.....	.....	.....
Chelsea, Mass.	32,452	20	2	.....	10	.....	15	.....	2	3
Chicopee, Mass.	25,401	8	.....	.....	.....	.....	4	.....	1	1
Danville, Ill.	27,871	9	1	.....	.....	.....	2	.....	.....	.....
East Orange, N. J.	34,371	.....	2	.....	32	.....	4	.....	2	.....

SCARLET EVER, MEASLES, DIPHTHERIA, AND TUBERCULOSIS—Contd.

City Reports for Week Ended Mar. 14, 1914—Continued.

Cities.	Population, United States census 1910.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
From 25,000 to 50,000 inhabitants—Continued.										
Elmira, N. Y.	37,176	16	2	.....	1	.....	2	.....	1	.....
Everett, Mass.	33,484	.....	.....	.....	2	.....	8	.....	2	2
Fitchburg, Mass.	37,826	9	2	.....	.....	.....	3	.....	5	1
Haverhill, Mass.	44,115	14	.....	.....	1	.....	7	.....	5	.....
Knoxville, Tenn.	36,346	.....	.....	.....	23	.....	.....	.....	.....	.....
La Crosse, Wis.	30,417	15	3	.....	.....	.....	.....	.....	1	.....
Lancaster, Pa.	47,227	.....	1	.....	.....	.....	3	.....	1	.....
Lexington, Ky.	35,099	19	3	.....	.....	.....	2	.....	.....	2
Little Rock, Ark.	45,941	15	1	.....	85	.....	.....	.....	1	.....
Lynchburg, Va.	29,494	9	.....	.....	2	.....	1	.....	1	.....
Malden, Mass.	44,404	16	1	.....	10	.....	15	1	2	.....
Newcastle, Pa.	35,280	.....	1	.....	.....	.....	3	.....	2	.....
Newport, Ky.	30,309	8	.....	.....	.....	.....	4	.....	3	3
Newport, R. I.	27,149	3	.....	.....	.....	.....	1	.....	.....	.....
Newton, Mass.	39,806	10	1	.....	12	.....	3	.....	1	.....
Niagara Falls, N. Y.	30,445	8	.....	.....	1	.....	.....	.....	1	1
Norristown, Pa.	27,875	10	1	.....	6	.....	.....	.....	.....	1
Orange, N. J.	29,630	10	3	.....	43	.....	3	.....	1	.....
Pasadena, Cal.	30,291	8	.....	.....	.....	.....	.....	.....	3	1
Pittsfield, Mass.	32,121	7	2	.....	.....	.....	.....	.....	1	.....
Portsmouth, Va.	33,190	10	1	.....	.....	.....	1	.....	.....	1
Racine, Wis.	38,002	18	3	.....	.....	.....	2	.....	.....	.....
Roanoke, Va.	34,874	18	.....	.....	36	.....	1	.....	3	3
Rockford, Ill.	45,401	12	1	.....	.....	.....	1	.....	.....	1
Sacramento, Cal.	44,696	17	1	.....	1	.....	.....	.....	1	1
San Diego, Cal.	39,578	5	.....	.....	.....	.....	.....	.....	3	3
South Omaha, Nebr.	26,259	9	1	.....	.....	.....	1	.....	.....	.....
Superior, Wis.	40,384	12	.....	.....	.....	.....	13	.....	.....	.....
Taunton, Mass.	34,259	19	.....	.....	1	.....	9	.....	.....	2
Waltham, Mass.	27,834	10	.....	.....	2	.....	4	.....	.....	.....
West Hoboken, N. J.	35,403	5	2	.....	5	.....	2	.....	3	2
Wilmington, N. C.	25,748	8	.....	.....	32	.....	.....	.....	.....	.....
York, Pa.	44,750	.....	4	.....	.....	.....	1	.....	1	.....
Zanesville, Ohio.	28,026	.....	1	.....	.....	.....	1	.....	.....	.....
Less than 25,000 inhabitants:										
Alameda, Cal.	23,383	8	.....	.....	4	.....	1	.....	1	1
Ann Arbor, Mich.	14,817	6	1	.....	.....	.....	2	.....	5	.....
Beaver Falls, Pa.	12,191	.....	.....	.....	.....	.....	2	.....	.....	.....
Bennington, Vt.	8,698	8	.....	.....	.....	.....	.....	.....	.....	.....
Braddock, Pa.	19,357	.....	3	.....	‡ 2	.....	3	.....	.....	.....
Cambridge, Ohio.	11,327	6	2	.....	.....	.....	2	1	.....	.....
Clinton, Mass.	13,075	2	1	.....	.....	.....	4	.....	1	.....
Coffeyville, Kans.	12,687	.....	.....	.....	23	.....	.....	.....	1	.....
Columbus, Ind.	8,813	2	.....	.....	10	.....	.....	.....	2	2
Concord, N. H.	21,497	7	.....	.....	.....	.....	.....	.....	.....	.....
Cumberland, Md.	21,839	11	2	.....	2	.....	7	.....	3	2
Dunkirk, N. Y.	17,221	.....	.....	.....	.....	.....	.....	.....	2	.....
Galesburg, Ill.	22,089	7	.....	.....	.....	.....	.....	.....	.....	.....
Harrison, N. J.	14,498	4	1	.....	1	.....	2	.....	1	.....
Kearny, N. J.	18,659	4	1	.....	11	.....	1	.....	1	.....
Marinette, Wis.	14,610	3	.....	.....	.....	.....	.....	.....	.....	.....
Massillon, Ohio.	13,879	3	.....	.....	1	.....	.....	.....	.....	1
Medford, Mass.	23,150	7	2	.....	.....	.....	1	.....	.....	1
Melrose, Mass.	15,715	3	1	.....	.....	.....	3	.....	.....	.....
Moline, Ill.	24,199	7	2	.....	.....	.....	1	.....	.....	1
Montclair, N. J.	21,550	12	1	.....	36	.....	4	.....	1	2
Morristown, N. J.	12,507	3	.....	.....	3	.....	.....	.....	.....	.....
Muncie, Ind.	24,005	16	.....	.....	.....	.....	9	.....	2	2
Nanticoke, Pa.	18,877	9	5	.....	.....	.....	1	.....	.....	.....
Newburyport, Mass.	14,949	12	1	.....	1	.....	.....	.....	1	.....
North Adams, Mass.	22,019	6	.....	.....	.....	.....	.....	.....	1	.....
Northampton, Mass.	19,431	3	.....	.....	5	.....	2	.....	.....	.....
Palmer, Mass.	8,610	1	.....	.....	.....	.....	.....	.....	.....	.....
Plainfield, N. J.	20,550	6	.....	.....	.....	.....	.....	.....	3	.....
Pottstown, Pa.	15,599	5	.....	.....	.....	.....	2	.....	.....	.....
Rutland, Vt.	13,546	7	.....	.....	1	.....	1	.....	.....	1
Saratoga Springs, N. Y.	12,693	5	.....	.....	1	.....	.....	.....	.....	.....
South Bethlehem, Pa.	19,973	11	.....	.....	2	.....	1	.....	.....	1
Steelton, Pa.	14,246	9	.....	.....	.....	.....	.....	.....	.....	.....
Wilkinsburg, Pa.	18,924	14	2	1	.....	.....	38	2	3	.....
Woburn, Mass.	15,308	5	.....	.....	.....	.....	.....	.....	.....	.....

IN INSULAR POSSESSIONS.

HAWAII.

Cholera Carrier at Honolulu.

A cholera carrier was found at Honolulu March 27, 1914, among Filipinos arrived from Hongkong.

Examination of Rats and Mongoose.

Rats and mongoose have been examined in Hawaii for plague infection as follows: Honolulu, week ended March 7, 1914, 358; Hilo, week ended February 28, 1914, 2,679. No plague-infected animal was found.

PORTO RICO.

Examination of Rats and Mongoose.

During the week ended March 14, 1914, 597 rats, 271 mice, and 3 mongoose were examined for plague infection. No plague-infected animal was found.

FOREIGN REPORTS.

QUARANTINE ASSIGNMENTS, 1914.

The following-named representatives of the Public Health Service have been detailed at fruit ports in the Mexican Gulf for the period of close quarantine, April 1 to November 1, 1914, for the purpose of inspecting vessels, their cargoes, crews, and passengers bound from said ports to ports in the United States and its possessions:

Acting Asst. Surg. I. A. Campbell, Vera Cruz, Mex.
Acting Asst. Surg. J. F. Eaves, Frontera, Mex.
Acting Asst. Surg. G. McG. Stewart, Progreso, Mex.
Acting Asst. Surg. M. D. Hollis, Tampico, Mex.
Acting Asst. Surg. R. P. Ames, Honduras and Guatemala ports.

ARABIA.

Plague—Debai.

Plague was declared present March 7, 1914, at Debai, in the state of Oman, Arabia.

CHINA.

Plague—Amoy.

The occurrence of 5 fatal cases of plague in Amoy and vicinity was reported February 18, 1914.

Plague—Hongkong.

The occurrence of 66 cases of plague was reported March 26, 1914, at Hongkong.

Plague-Infected Rat—Shanghai.

During the week ended February 21, 1914, 257 rats were examined at Shanghai for plague infection. One plague-infected rat was found.

JAPAN.

Communicable Diseases.

Communicable diseases have been notified in the empire of Japan, exclusive of the island of Taiwan (Formosa) as follows:

MONTH OF JANUARY, 1914.

Diseases.	Cases.	Deaths.	Diseases.	Cases.	Deaths.
Diphtheria	1,876	565	Scarlet fever	111	10
Dysentery	82	14	Smallpox	[2] 1	.....
Paratyphoid fever	241	30	Typhoid fever	1,312	299
Plague	[1] 1	1			

[1] In Yokohama.
[2] In Nagasaki-ken.

VENEZUELA.

Examination of Rats—Caracas.

During the month of December, 1913, 2,749 rats were examined at Caracas for plague infection. This is the largest number of rats examined in the city during any one month. No plague-infected rat was found.

Rat-Proofing Work—La Guaira—Puerto Cabello.

Acting Asst. Surg. Stewart, at La Guaira, reported, March 8, 1914, that rat-proofing work was being carried out in customs storage warehouses at La Guaira. Cement floors were being laid and side walls cemented to a certain height. Similar precautions were to be required in many of the merchants' warehouses in the city as well as on the sea front. Rat-proofing work was also being carried out at Puerto Cabello, Venezuela.

ZANZIBAR.

Plague-Infected Rats—Zanzibar.

During the three weeks ended February 14, 1914, 3,269 rats were examined at Zanzibar for plague infection. Of this number 14 were found to be plague infected.

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX.

Reports Received During Week Ended Apr. 3, 1914.

CHOLERA.

Places.	Date.	Cases.	Deaths.	Remarks.
China:				
Hongkong	Feb. 8-14	1	1	
Dutch East Africa:				
Java—				
Batavia	Feb. 8-14	2	1	Natives.
India:				
Bassein	Feb. 1-7	1	1	
Bombay	Feb. 15-21	2		
Calcutta	Feb. 8-14		81	
Negapatam	Feb. 1-7	33	14	
Rangoon	Feb. 1-14	11	8	
Straits Settlements:				
Singapore	Feb. 1-14	8	4	

YELLOW FEVER.

Brazil:				
Bahia	Feb. 22-28	1	3	
Southern Nigeria:[1]				
Omitsha	Jan. 24	1		

[1] Bulletin Sanitaire, Belgium, Mar. 7, 1914.

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received During Week Ended Apr. 3, 1914—Continued.

PLAGUE.

Places.	Date.	Cases.	Deaths.	Remarks.
Arabia:				
Debal	Mar. 7			Present.
Chile:				
Iquique	Feb. 1–28	11	6	
China:				
Amoy	Feb. 18		5	Present in the island.
Hongkong	Feb. 8–14	12	12	Mar. 25, 66 cases.
Dutch East Indies:				
Java				Year 1913: Cases, 11,218; deaths, 10,556.
Egypt:				
Alexandria	Feb. 19		1	
Port Said	Feb. 22	1		
India:				
Bombay	Feb. 15–21	29	30	
Calcutta	Feb. 8–14		2	
Karachi	Feb. 15–21	54	45	
Rangoon	Feb. 1–14	91	88	
Japan:				
Yokohama	Jan. 1–31	1	1	Case previously reported.
Turkey in Asia:				
Jiddah	Mar. 3–4	2	1	

SMALLPOX.

Algeria:				
Oran, department				Feb. 1–28: Cases, 5; deaths, 4.
Austria:				
Galicia	Feb. 15–21	1		
Moravia	do	2		
Silesia	do	1		
Tyrol	do	1		
Upper Austria	do	1		
Belgium:				
Liege	Mar. 1–7		6	
Brazil:				
Bahia	Feb. 22–28	2		
Para	do		3	
Canada:				
Montreal	Mar. 15–21	6		
Toronto	do	2		
Winnipeg	Mar. 20	1		
China:				
Hongkong	Feb. 8–14	1	1	
Shanghai	Feb. 16–22	3	5	
Cuba:				
Sagua la Granda	Feb. 1–28	1	1	
Dutch East Indies:				
Java	Feb. 1–7	34	5	In the western part.
Egypt:				
Alexandria	Feb. 27–Mar. 4	1	2	
Cairo	Feb. 12–18	16	2	
Port Said	do	2	1	
France:				
Bordeaux	Mar. 8–14		1	
Nantes	Mar. 1–7	1		
Great Britain:				
Aberdeen	do		1	
Edinburgh	do		1	
London	Mar. 1–14	2		
Japan:				
Nagasaki	Jan. 1–31	1		Mar. 1–31: 3 cases with 1 death.
Tokyo	Mar. 7	9		
Mexico:				
Aguascalientes	Mar. 9–15		10	
Monterey	Mar. 2–8	2		
Mexico	Nov. 29–Dec. 27	63	12	
Tampico	Feb. 22–Mar. 10	100	27	
Russia:				
Moscow	Feb. 1–14	10	2	
Odessa	Feb. 8–14	1		
Riga	Feb. 22–28	7		
St. Petersburg	Feb. 15–28	10	1	
Spain:				
Barcelona	Mar. 1–14		15	
Valencia	Mar. 8–14	1		

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received During Week Ended Apr. 3, 1914—Continued.

SMALLPOX—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Switzerland:				
Basel	Feb. 8–Mar. 7	41		
Turkey in Asia:				
Beirut	Feb. 22–Mar. 7	16	8	
Jerusalem	Feb. 1–28	1		
Tripoli	Feb. 22–28	28	3	
Turkey in Europe:				
Constantinople	Feb. 28–Mar. 6		3	
Saloniki	Mar. 1–7		3	

Reports Received from Dec. 27, 1913, to Mar. 27, 1914.

CHOLERA.

Austria-Hungary				
Bosnia-Herzegovina—				
Brod	Nov. 13–18	2		
Kostjnica	do	1		
Novigrad	Oct. 26–Nov. 5	1		
Sjekocac	Nov. 6	1		
Travnik, district	Dec. 10–16	6		
Vranduk	Nov. 20	1		
Zenica	Oct. 20–Nov. 19	9	2	
Croatia-Slavonia—				
Pozenga	Nov. 18–Dec. 1	2		
Syrmien—				
Adasevci	do	6	2	
Semlin	do	1	1	
Vitrovica—				
Dobrovic	do	2	2	
Hungary				Total, Sept. 1–Dec. 29: Cases, 729; deaths, 372; Dec. 29, free.
Bacs-Bodrog, district	Nov. 9–Dec. 29	52	31	
Jasz-Nagy-Kun-Szolnok—				
Szolnok	Nov. 9–15	2	2	
Maramaros	Nov. 30–Dec. 6	1	1	
Pest Pilis—				
Soroksar	Nov. 9–22	2	1	
Szaboles—				
Nyiregyhaza	Nov. 9–15	1	1	
Temes—				
Varasliget	do		1	
Torontal	Nov. 9–Dec. 13	27	19	
Ung—				
Jasza	Nov. 9–15	1	1	
Ceylon:				
Colombo	Nov. 9–Jan. 17	33	19	
China:				
Hongkong	Nov. 9–Dec. 20	4		
Dutch East Indies:				
Java—				
Batavia and Tanjong Priok.	Nov. 9–Dec. 27	45	34	
Do	Jan. 18–24	1	1	
Samarang	Nov. 30–Dec. 27	47	25	
Sumatra—				
Padang	Dec. 1–Jan. 3	79	50	
India:				
Bombay	Nov. 10–Feb. 1	18	9	
Calcutta	Nov. 9–Jan. 24		485	
Madras	Nov. 16–Feb. 14	7	4	
Negapatam	Jan. 4–24		21	
Rangoon	Nov. 1–Dec. 31	5	1	
Do	Jan. 1–31	2	1	
Indo-China:				
Laos (Shan States)	Jan. 1–10	10		Along the upper Mekong River.
Saigon	Jan. 13–26	2		

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received from Dec. 27, 1913, to Mar. 27, 1914—Continued.

CHOLERA—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Philippine Islands:				
Manila	Nov. 9–Feb. 14	81	52	Total, Aug. 23–Jan. 24: Cases, 186; deaths, 124. Third quarter, 1913: Cases, 14; deaths, 6. Jan. 3, 1 fatal case on s. s. Sigismund from Rabal, New Guinea. At the necropsy pathological lesions of cholera and beriberi were found.
Provinces				Total, Aug. 23–Dec. 27: Cases, 148; deaths, 94.
Bulacan—				
Bulacan	Dec. 14–20			Present in vicinity.
Meycauayan	do			Present.
Capiz				Total, Dec. 17–23: Cases, 26; deaths, 18.
Banga	Dec. 17–20			Present.
Capiz	Jan. 28			Do.
Calivo	Dec. 17–Jan. 24			1 death daily.
New Washington	do			Present.
Cavite—				
Santa Cruz	Nov. 13–19			Do.
Cebu—				
Cebu	do			Do.
Opon	Nov. 19	1		On Mactan Island.
Pampanga	Dec. 7–Jan. 28			Present in Guagua, Macabebe, San Fernando, and other places.
Pangasinan	Dec. 19–29			Present in Dagupan, Lingayen, San Carlos, and Urdaneta.
Rizal—				
Las Pinas	do	1		
Pasig	Nov. 19			Present.
Pateros	Jan. 28			Do.
Rizal	do			Do.
Roumania				Total, Nov. 14 to Dec. 7: Cases, 18; deaths, 15.
Russia:				
Bessarabia—				
Ismail	Oct. 26–Nov. 8	6	1	
Ekaterinoslav	do	1		
Kherson	do	6	9	
Taurida—				
Dneiper district	do	1	2	
Servia				Nov. 10–24: 8 cases with 2 deaths in the districts Podrigne and Pojarevatz.
Siam:				
Bangkok	Nov. 2–Jan. 24		99	
Straits Settlements:				
Singapore	Nov. 2–Jan. 17	19	17	
Turkey in Asia:				
Aivali	Jan. 10–23	9	6	
Beirut	Dec. 23	2	1	From among troops on the s. s. Bahr Amer from Rodosto.
Smyrna	Dec. 16–Jan. 8	11	4	
Trebizond	Dec. 9–Jan. 24	22	16	Dec. 9–16: 6 cases among troops from s. s. Guldjemal. Jan. 17 1 case in the city.
Turkey in Europe:				
Constantinople	Nov. 25–Feb. 15	141	56	Total, Aug. 2–Feb. 15: Cases, 216; deaths, 96.
Dardanelles	Jan. 9–20	10	9	
Gallipoli	Jan. 1–3	2	2	
Pera	Jan. 3–10	5		
Rodosto	Dec. 21–Jan. 9	22		

YELLOW FEVER.

Brazil:				
Bahia	Nov. 23–Feb. 21	8	10	
Ceara	Nov. 1–30		2	
Ecuador:				
Guayaquil	Nov. 1–Dec. 31	9	6	
Do	Jan. 1–31	7	2	
Milagro	do	2	1	
Naranjito	do	3	2	

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received from Dec. 27, 1913, to Mar. 27, 1914—Continued.

YELLOW FEVER—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Mexico:				
Merida	Dec. 10–11	1	1	From Campeche.
Do	Jan. 4–10	1	1	Do.
Southern Nigeria:				
Lagos	Oct. 20–Dec. 28	5	1	Among Europeans from a vessel. Feb. 26, present.
Togo:				
Lome	Sept. 12	1		
Trinidad:				
Brighton	Dec. 30	1		Total, Nov. 22–Dec. 30: Cases, 10; deaths, 3, including previous reports.
Venezuela:				
Caracas				Feb. 28, 1 case.

PLAGUE.

Australia:				
Thursday Island Quarantine station.	May 21	5		Pestis minor from s. s. Taynan from Hongkong to Townville.
Azores:				
Terceira—				
Angra-Heroismo	Dec. 21		1	
Brazil:				
Bahia	Nov. 23–Feb. 21	25	10	
Pernambuco	Dec. 16–31		1	
Do	Jan. 1–15		1	
Rio de Janeiro	Nov. 16–22	1	1	
British East Africa:				
Kisumu	Sept. 12–Oct. 13	2		Jan. 14–Nov. 15, 1913: Cases, 20; deaths, 22.
Mombasa	Sept. 12–Dec. 15	31	16	Feb. 6–Dec. 15: Cases, 200; deaths, 173, including previous reports.
Nairobi	Sept. 12–Nov. 15	3	3	
Ceylon:				
Colombo	Jan. 25–Feb. 7	7	7	Septicemic. Jan. 25–Feb. 12: 11 deaths.
Kandy	do	1		From Colombo. Also septicemic.
Chile:				
Iquique	Nov. 9–Jan. 31	18	9	
Do	Jan. 11–31	3	3	
China:				
Hongkong	Nov. 2–Feb. 7	81	74	Mar. 3–17: 67 cases.
Shanghai	Oct. 1–7	1		
Cuba:				
Habana	Mar. 5–26	5	1	
Dutch East Indies:				
Java				Total in East Java, year 1913 Cases, 11,218; deaths, 10,556.
Provinces—				
Kebiri	Nov. 1–Dec. 31	547	481	
Madioen	do	151	140	
Malang	do	1,550	1,463	
Surabaya	do	93	95	
Ecuador:				
Babahoyo	do	1		
Duran	Dec. 1–31	1		
Do	Jan. 1–31	1	1	
Guayaquil	Nov. 1–Dec. 31	349	157	
Do	Jan. 1–31	55	21	
Manta	Dec. 1–31	8		
Milagro	Nov. 1–Dec. 31	2	1	
Naranjito	do	3	1	
Yaguachi	Nov. 1–30	2	2	
Do	Jan. 1–31	1	1	
Egypt				Jan. 1–Dec. 24, 1913: Cases, 654; deaths, 304. Jan. 1–Feb. 18: Cases, 15; deaths, 7.
Alexandria	Feb. 18	1		
Cairo	Feb. 13	1		
Por Said	Feb. 10	2	2	
Provinces—				
Assiout	Jan. 5	1	1	
Assouan	Dec. 10	1		
Do	Jan. 5	1	1	
Fayoum	Feb. 10	1		
Garbieh	Dec. 11	1		
Do	Jan. 15–17	7	2	
Minieh	Dec. 9–24	3	1	
Do	Jan. 8–29	2	2	

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received from Dec. 27, 1913, to Mar. 27, 1914—Continued.

PLAGUE—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
India				Total Jan. 1, 1913–Jan. 3, 1914: Cases, 238,198; deaths, 198,875. Jan. 4–31: Cases, 34,714; deaths, 28,061.
Bassein	Jan. 4–31	52	37	Total, Jan. 1, 1913–Jan. 3, 1914: Cases, 304; deaths, 283.
Bombay	Nov. 9–Feb. 14	148	122	
Calcutta	Nov. 2–Feb. 7		20	
Karachi	Nov. 9–Feb. 14	237	225	
Madras	Nov. 16–Feb. 14	5	3	
Moulmine	Jan. 4–24		18	Jan. 1, 1913–Jan. 3, 1914: Cases, 574; deaths, 576.
Rangoon	Oct. 26–Dec. 31	74	68	
Do	Jan. 1–31	81	79	
Indo-China				Total Jan. 1–Dec. 31: Cases, 3,961; deaths, 3,742.
Saigon	Nov. 11–Jan. 26	14		
Japan				Total Jan. 1–Dec. 31: Cases, 27; deaths, 20; exclusive of Taiwan.
Kobe	Dec. 1–7	1		
Yokohama	Jan. 4–10	1		Total Sept. 19–Jan. 10: Cases, 22; deaths, 17.
Mauritius	Oct. 26–Jan. 8	82	54	Total Jan. 1–Nov. 27: Cases, 273; deaths, 163.
Morocco:				
Casablanca	Jan. 7	1	1	
El-Araish (Larache)	Sept. 17	1		Among the military.
New Caledonia:				
Bourail	Sept. 1–Oct. 14	8	2	In a school of the tribe of the Azaren.
Peru				Deaths not reported.
Ancachs—				
Casma	Feb. 9–15	2		Dec. 1–Feb. 8, present.
Nepena	Nov. 1–Jan. 18			Do.
Arequipa—				
Mollendo	Dec. 1–Feb. 15	12		
Cajamarca—				
Contumaza	Jan. 19–24	12		Feb. 8, present.
Callao—				
Callao	Jan. 19–Feb. 15	5		
Lambayeque—				
Chiclayo	Dec. 1–Feb. 15	72		
Ferrenaje	Dec. 1–Feb. 8	18		
Guadalupe	Dec. 1–Feb. 15	15		Dec. 1–Feb. 8, present.
Pacasmayo	Jan. 25–Feb. 15	5		
Libertad—				
San Pedro	Dec. 1–Feb. 8	34		
Trujillo	Dec. 1–Feb. 15	61		
Lima	Dec. 1–Jan. 18	6		
Lima	Dec. 1–Feb. 15	45		
Pisco	Dec. 1–Jan. 18	2		
Monsefu	do	2		
Piura—				
Catacaos	Dec. 1–Feb. 15	13		
Piura	Dec. 1–Jan. 24	10		Feb. 8, present.
Philippine Islands:				
Manila	Nov. 23–Feb. 14	10	9	Third quarter, 1913: Cases, 2; deaths, 1.
Russia:				
Saratov	Feb. 11	1		
Ural, territory				Total Oct. 20–Nov. 10: Cases, 212; deaths, 170; and 2 fatal cases from Issum Tube.
Djakisabevsk district—				
Djumarta	Nov. 9–10	5	1	
Djantayu	Nov. 8–10	2	2	
Kizilu	Nov. 8	1	1	
Fourteenth village	Nov. 7–9	6		
Sarbas	Nov. 8–10	13	7	
Kaziljar district	Nov. 5–10	39	24	In Assaukurt, Baitchurek, Biskuduk, and Djamankuduk.
Lbistchensky district—				
Issum Tube	Oct. 20–Nov. 10	138	127	
Kaimikov	Nov. 4–10	6	6	
Siam:				
Bangkok	Nov. 2–Jan. 24		7	

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received from Dec. 27, 1913, to Mar. 27, 1914—Continued.

PLAGUE—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Tripoli:				
Bengazi	Jan. 31			Present.
Turkey in Asia:				
Beirut	Dec. 10-23	2	2	
Jiddah	Feb. 2-28	2	1	
Zanzibar	Dec. 31-Jan. 21	5	3	On s. s. Prasident from Dar-es-Salaam.

SMALLPOX.

Algeria:				
Departments—				
Algiers	Sept. 1-Dec. 31	10		
Constantine	Oct. 1-Dec. 31	15		
Oran	Sept. 1-Nov. 30	216		
Arabia:				
Aden	Nov. 25-Feb. 2	5	5	
Maskat	Nov. 30-Dec. 6	10		Dec. 20, present.
Matarah	Dec. 23-Jan. 10	9		Nov. 30, present; Feb. 14, still present.
Argentina:				
Buenos Aires	Nov. 1-30		1	
Rosario	Dec. 1-31	1		
Australia:				
New South Wales				July 1, 1913-Jan. 31, 1914: Cases, 1,078.
Sydney, metropolitan area				July 1, 1913-Jan. 8, 1914: Cases, 1,032.
Western Australia—				
Freemantle				Dec. 2: 1 fatal case on R. M. S. Malwa, from London via Port Said, Aden, and Colombo.
Austria-Hungary:				
Coastland—				
Trieste	Jan. 25-31	3		
Lower Austria—				
Vienna	Jan. 4-24	6		
Moravia	Jan. 18-Feb. 7	3		
Tyrol and Vorarlberg	Nov. 23-Jan. 10	5		
Upper Austria	Dec. 14-Feb. 7	19		
Brazil:				
Bahia	Nov. 23-Feb. 21	26		
Para	Dec. 1-Feb. 21	25	42	
Pernambuco	Nov. 1-Jan. 15		70	
Rio de Janeiro	Nov. 9-Feb. 7	402	73	
Canada:				
Manitoba—				
Winnipeg	Feb. 14-Mar. 7	10		
Ontario—				
Fort William	Feb. 24-Mar. 2	1		
Hamilton	Jan. 1-Feb. 28	23		
Ottawa	Dec. 7-Mar. 7	22		
Toronto	do	6	1	
Quebec—				
Montreal	Dec. 7-Mar. 14	60		
Quebec	Jan. 24-31	1		
Canal Zone:				
Panama				Nov. 1-30: Santo Tomas hospital, 1 case from a vessel from Callao.
Ceylon:				
Colombo	Nov. 30-Dec. 6	1		
China:				
Amoy	Dec. 14-Jan. 10			Present.
Antung	Jan. 4-Feb. 15	3		
Dairen	Dec. 7-17	6	1	
Hankow	Nov. 2-Jan. 24	12	1	
Hongkong	Dec. 14-Feb. 7	6	4	
Nanking	Jan. 24			Do.
Shanghai	Dec. 8-Feb. 19	8	5	Deaths among natives.
Tientsin	Nov. 9-15		1	
Ting Chow	Jan. 5			Epidemic, 130 miles from Amoy.
Tsing Tau	Jan. 15-31	2		
Tong An	Dec. 27			Present, 20 miles from Amoy.

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received from Dec. 27, 1913, to Mar. 27, 1914—Continued.

SMALLPOX—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Dutch East Indies:				
Java				Dec. 13–Feb. 7: 174 cases with 56 deaths in the western part, and 100 cases with 63 deaths in the interior.
Batavia	Nov. 27–Jan. 11	66	69	
Besoeki	Oct. 19–29	227	47	
Madioen	Oct. 19–28	36	12	
Surabaya	Oct. 28–Jan. 31	6		
Surakarta	Oct. 19–Dec. 6	481	91	
Egypt:				
Alexandria	Nov. 26–Feb. 11	21	9	
Cairo	Nov. 19–Feb. 4	114	69	
Port Said	Dec. 3–Jan. 28	2	1	
France:				
Marseille	Nov. 1–Jan. 31		98	
Nantes	Feb. 1–14	2		
Nice	Nov. 1–Dec. 31	2		
Paris	Nov. 23–Feb. 14	19		
St. Etienne	Nov. 16–Feb. 15	11	4	
Germany				Dec. 7–Mar. 7: Cases, 19.
Berlin	Feb. 8–14	2		
Bremen	do	1		
Breslau	do	1		
Hamburg	Dec. 11–25	4		
Kehl	Jan. 1–31		1	
Lubec	Feb. 15–21	1		
Gibraltar	Dec. 1–Mar. 1	5		
Great Britain:				
Aberdeen	Feb. 22–28	4		
Cardiff	Feb. 16–21	1		
London	Jan. 18–Feb. 28	3		
Nottingham	Dec. 21–27	28		
Southampton	Feb. 2–28	1		
Greece				Jan. 28–Feb. 12: Present in the barracks at Athens and in the surrounding country.
Achaia and Elis, Province	Jan. 29			Present.
Piraeus	Jan. 18–Feb. 12	19	11	
Grenada	Mar. 18	3		
Guadeloupe:				
Pointe a Pitre quarantine station, Islet a Cosson.	Feb. 16–23	10	1	From among returned troops from s. s. Perou from Havre, via Bordeaux and Santander.
India:				
Bombay	Nov. 23–Feb. 1	49	23	
Calcutta	Nov. 2–Feb. 7		63	
Karachi	Nov. 2–Jan. 31	7	1	
Madras	do	21	5	
Indo-China:				
Saigon	Nov. 11–24	1	1	
Italy:				
Leghorn	Dec. 21–27	1		
Naples	Jan. 3	1		
Turin	Dec. 22–28	1		
Japan				Total Jan. 1–Dec. 31: Cases, 108; deaths, 39, exclusive of Taiwan.
Fukuoka ken	Dec. 1–31	2		
Nagasaki				Jan. 27–Feb. 22: 10 cases, 1 death
Tokyo	Nov. 1–30	1		
Yokohama	Jan. 6–12	1	1	
Mauritius	Oct. 2–25	60	4	
Mexico:				
Acapulco	Dec. 6–Feb. 7		2	
Aguascalientes	Dec. 1–Mar. 8		83	
Chihuahua	Dec. 29–Feb. 1		10	
Durango	Apr. 1–May 31		77	
Guadalajara	Jan. 11–Feb. 14	89	46	
Imuris	Dec. 29–Jan. 4	5		
Juarez	Feb. 15–28		4	
Llano	Jan. 17	8		
La Paz	Jan. 16–22	3	1	
Mexico	Oct. 26–Nov. 29	31	15	
Monterey	Nov. 17–Mar. 1	2	4	
Salina Cruz	Jan. 18–24	1	1	
San Luis Potosi	Nov. 2–Jan. 24	4	7	
Tampico	Dec. 24–Jan. 30	100	31	
Vera Cruz	Dec. 6–Feb. 28	31	8	
Netherlands, The	Feb. 8–14	1	1	

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.

Reports Received from Dec. 27, 1913, to Mar. 27, 1914—Continued.

SMALLPOX—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
New Zealand				Apr. 8, 1913, to Jan. 7, 1914; Cases 2,000, including report, p. 2863, vol. 28.
Norway:				
Trondhjem	Nov. 1–Feb. 28	19		
Peru:				
Callao	Jan. 26			Still epidemic.
Lima	do			Do.
Philippine Islands:				
Manila				Third quarter, 1913: Cases, 15.
Portugal:				
Lisbon	Nov. 16–Feb. 28	19		
Russia:				
Moscow	Dec. 14–Feb. 14	19	4	
Odessa	Nov. 16–Jan. 10	11	2	
St. Petersburg	Nov. 23–Feb. 14	50	14	
Vladivostok	Dec. 22–Jan. 28	5		
Warsaw	Oct. 5–Dec. 15	50	34	
Servia:				
Belgrade	Nov. 7–Feb. 21	122	48	
Spain:				
Almeria	Nov. 1–Jan. 31		9	
Barcelona	Nov. 30–Feb. 28		86	
Madrid	Nov. 1–Jan. 31		87	
Seville	Nov. 1–30		1	
Valencia	Dec. 1–Feb. 28	12		
Straits Settlements:				
Penang	Nov. 2–Dec. 6	13	1	
Singapore	Nov. 2–22	2		
Switzerland:				
Canton—				
Basel	Nov. 23–Feb. 27	74		
Genoa	Nov. 23–29	3	1	
Turkey in Asia:				
Adana	Jan. 10–24	2		Dec. 28, epidemic.
Beirut	Nov. 23–Feb. 21	262	117	
Jaffa	Dec. 6–Feb. 28	25	6	
Mersina	Jan. 4–Feb. 15	3		
Smyrna	Nov. 16–Feb. 14		164	
Tarsus	Dec. 28–Feb 8			Still present.
Trebizond	Jan. 11–24			Present.
Tripoli	Jan. 25–Feb. 21	23		
Turkey in Europe:				
Constantinople	Nov. 20–Feb. 27		15	
Saloniki	Dec. 1–Feb. 28		84	

SANITARY LEGISLATION.

STATE LAWS AND REGULATIONS PERTAINING TO PUBLIC HEALTH.

CALIFORNIA.

Leprosy—Made Quarantinable. (Reg. Bd. of H., Feb. 7, 1914.)

Whereas leprosy has been shown to exist in certain sections of California:

Resolved, That, in the opinion of the State board of health, leprosy be, and it is hereby, added to the list of quarantinable diseases mentioned in rule 1, section 13,[1] of an act entitled "An act to amend sections 2, 3, 13, and 21 of an act entitled 'An act for the preservation of the public health of the people of California, and empowering the State board of health to enforce its provisions, and providing penalties for the violation thereof,' approved March 23, 1907," such action being necessary for the protection of the public health.

IOWA.

Common Towels—Use in Public Places Prohibited. (Reg. Bd. of H., Jan. 14, 1914.)

Whereas the roller towel, or common towel, used in public places has been a means of dissemination of many infectious and contagious diseases, thereby being a menace to the public health, therefore be it

Resolved, That the following rule, to be known as rule 10, chapter 4, of the revised rules and regulations of the Iowa State board of health be, and the same is hereby, enacted:

RULE 10, SECTION 1. The use of the roller towel or any other form of towel used in common in hotels, restaurants, public buildings, public toilets, public washrooms, or in any other building or place where such common towel is in use by the general public within the State of Iowa, is hereby prohibited and ordered discontinued.

SEC. 2. That under the authority of section 11 of chapter 168, Laws of Thirty-third General Assembly, commonly known as the Iowa hotel law, the inspector of hotels and his deputies are requested to report to the State board of health any neglect or violation of this rule on the part of the hotels of Iowa.

SEC. 3. It is hereby made the duty of the local boards of health to adopt and enforce this rule, as provided in section 2572, Supplement to the Code, 1907.

MAINE.

Tuberculosis—Disinfection of Apartments. (Chap. 67, Act Mar. 18, 1913.)

Section 4 of chapter 78 of the public laws of 1909 is hereby amended by adding thereto the following words: "But the methods or processes of distinction and the material or agencies with which it shall be done shall be those which are advised by the State board of health for work of that kind in connection with tuberculosis," so that said section, as amended, shall read as follows:

[1] Public Health Bulletin No. 62, p. 299.

SEC. 4. When notified of the vacation of any apartments or premises as provided in section 3 hereof, the health officer or secretary of the local board of health or his agent shall within 24 hours thereafter visit said apartments or premises, and shall order and direct that, except for the purposes of cleansing or disinfection, no infected article shall be removed therefrom until properly and suitably cleansed or disinfected, and said local board of health shall determine the manner in which such apartments or premises shall be disinfected, cleansed, or renovated, in order that they may be rendered safe and suitable for occupancy. If the health authorities determine that disinfection is sufficient to render them safe and suitable for occupancy, such apartments or premises, together with all infected articles therein, shall immediately be disinfected by the health authorities at public expense, or, if the owner prefers, by the owner at his expense, to the satisfaction of health authorities; but the methods or processes of disinfection and the material or agencies with which it shall be done shall be those which are advised by the State board of health for work of that kind in connection with tuberculosis.

State Board of Health—Powers of—Regulations. (Chap. 149, Act Mar. 31, 1913.)

Section 8 of chapter 18 of the revised statutes, as amended in section 2 of chapter 48 of the public laws of 1909, is hereby further amended by inserting after the word "diseases" in the 29th line the following: "For guarding against the transmission of infectious and contagious diseases through the medium of common towels, common drinking cups, and other articles which may carry infection from person to person; for the sanitation of railway service and that of other common carriers," so that said section, as amended, shall read as follows:

SEC. 8. The more effectually to protect the public health the State board of health may establish such systems of inspection as in its judgment may be necessary to ascertain the actual or threatened presence of the infection of Asiatic cholera, smallpox, diphtheria, scarlet fever, plague, or typhus fever; and any duly authorized agent or inspector of said board may enter any building, vessel, railway car, or other public vehicle to inspect the same and to remove therefrom any person affected by said diseases; and for this purpose he may require the person in charge of any vessel or public vehicle other than a railway car to stop such vessel or vehicle at any place, and he may require the conductor of any railway train to stop his train at any station or upon any sidetrack and there detain it for a reasonable time; provided, that no conductor shall be required to stop his train when telegraphic communication with the dispatcher's office can not be obtained or at such times or under such circumstances as may endanger the safety of the train and passengers; and provided further, that any such agent or inspector may cause any car which he may think may be infected with any of said diseases to be sidetracked at any suitable place and there be cleansed, fumigated, and disinfected. And the said board of health may from time to time make, alter, modify, or revoke rules and regulations for guarding against the introduction of any infectious or contagious diseases into the State, including rabies, or hydrophobia of animals and men; for the control and suppression thereof if within the State; for the quarantine and disinfection of persons, localities, and things infected or suspected of being infected by such diseases; for guarding against the transmission of infectious and contagious diseases through the medium of common towels, common drinking cups, and other articles which may carry infection from person to person; for the sanitation of railway service and that of other common carriers; for the transportation of dead bodies when death results from any infectious or contagious disease; for the speedy and private interment of the bodies of persons who have died from said diseases; and, in emergency, for providing those sick with said diseases with necessary medical aid and with temporary hospitals for their accommodation and for the accommodation of their nurses and attendants. And the said board may declare any

and all of its rules and regulations made in accordance with the provisions of this section to be in force within the whole State, or within any specified part thereof, and to apply to any person or persons, family, camp, building, vessel, railway car, or public vehicle of any kind.

MASSACHUSETTS.

Ice Cream—Manufacture, Care, and Sale. (Chap. 67, Act Feb. 21, 1914.)

SECTION 1. Section 1 of chapter 743 of the acts of the year 1913 [1] is hereby amended by striking out the word "and" in the first line and inserting in place thereof the word "or," so as to read as follows:

"SECTION 1. Substances manufactured or sold under the general name of 'ice cream' shall contain not less than 7 per cent of milk fat, and if flavored with fruit shall be flavored only with sound, clean, matured fruit, and if containing nuts shall contain only sound, matured, nonrancid nuts."

SEC. 2. Said chapter 743 is hereby further amended by striking out section 2 and inserting in place thereof the following new section:

"SEC. 2. Whoever, by himself or by his servant or agent, or as the servant or agent of another person, manufactures, exposes for sale, or has in his custody or possession, with intent to sell or sells, under the general name of 'ice cream,' substances in violation of section 1 of this act, shall be punished by a fine not exceeding $100."

WASHINGTON.

Typhoid and Paratyphoid Fever—Removal of Patient. (Reg. Bd. of H., Jan. 26, 1914.)

Resolved, That no case of typhoid fever or paratyphoid fever shall be transported from the jurisdiction of one health officer to the jurisdiction of another health officer without first notifying the State board of health office, when the commissioner will immediately notify the health officer of the county or city within whose jurisdiction the person suffering from the disease is to be moved.

---

[1] Public Health Reports Oct. 3, 1913, p. 2075.

MUNICIPAL ORDINANCES, RULES, AND REGULATIONS PERTAINING TO PUBLIC HEALTH.

ELIZABETH, N. J.

Milk and Cream—Production, Care, and Sale. (Reg. Bd. of H., Jan. 9, 1913.)

SECTION 1. No person, corporation, or association of persons shall sell or deliver, or have in possession for sale or delivery in the city of Elizabeth, any milk or cream, without first obtaining from the board of health a permit for such sale or delivery; said permit shall continue for the term of one year, which will not be issued unless said board is satisfied after inspection with the clean and sanitary condition of the stable, cows, wagons, store, or place of business of the applicant therefor.

SEC. 2. No permit, as required in the section preceding, shall be issued by the board of health until there shall be paid to the said board of health for the issuing thereof and for a proper inspection and supervision of the sale of the milk, the sum of $2.

SEC. 3. Each permit to be granted as set forth in the two sections next preceding for the term of one year from the 1st of March of each year: *Provided*, That if any person so licensed as aforesaid, or any of his employees, servants, or agents, shall violate any ordinance or rule of the board of health relating to the sale, distribution, or inspection of milk, such license may, at the discretion of the board of health, be revoked.

SEC. 4. Any such person or persons engaged in the sale of milk within the city of Elizabeth shall, when so requested by the board of health or its agents, furnish said board such samples of milk or cream in his or their possession or under their control as the said board of health may deem necessary for tests and analyses, and shall furnish the said board a true statement in writing upon blanks to be supplied setting forth the average amount of milk which he or they sell each day, the locality from which said milk was procured, and also a full and complete list of the names of persons from whom said milk was purchased, and the names and addresses of all persons and customers to whom he or they may sell or deliver milk within said city, and said blanks, when filled in as aforesaid, shall be signed by the person selling said milk, to whom said blank shall be tendered.

SEC. 5. Any person or persons engaged in the sale of milk within the city of Elizabeth shall notify the board of health in writing immediately upon changing the source of supply of the milk so sold by him or them within said city of such change, and said notice shall also state the name or names of the persons supplying said milk and the locality from which said milk is procured.

SEC. 6. No person shall sell or offer for sale in the city of Elizabeth any milk unless according to the following standards:

Certified milk (*class 1*).—This term shall be limited to milk certified by a properly organized medical milk commission.

Inspected milk (*class 2*).—This term shall be limited to milk produced and sold under the following conditions: *a*, *b*, *c*, *d*, *e*, *f*, *g*, *h*, *i*, *j*, *k*, *l*, *m*, *n*.

(*a*) Containing more than 88.50 per cent of water or fluids.

(*b*) Containing less than 11.50 per cent of milk solids.

(*c*) Containing less than 3 per cent of milk fats.

(*d*) From which any part of the cream has been removed.

(*e*) Containing any dirt, foreign matter, or sediment.

(*f*) Containing any unhealthful ingredients, substance, or preservative.

(*g*) Containing any pathogenic bacteria.

(*h*) Drawn from any cow which has been fed on garbage, refuse, fermenting brewer's grains, or other improper food.

(*i*) Drawn from any cow within 15 days before or 5 days after parturition.

(*j*) Drawn from any cow into an uncovered milking pail.

(*k*) Drawn from any cow which has reacted after January 1, 1914, to a tuberculin test by a licensed veterinarian designated by the board of health.

(*l*) Which has not been immediately cooled to 50° F. and maintained at that temperature until sold to consumer.

(*m*) Which has existed or has been kept under conditions contrary to the provisions of this code.

(*n*) Containing more than 250,000 bacteria per cubic centimeter.

Pasteurized milk (*class 3*).—This term shall be limited to milk produced and sold under the following regulations:

(1) Pasteurized milk must conform to the following paragraphs of inspected milk: *a*, *b*, *c*, *d*, *e*, *f*, *g*, *h*, *i*, *j*, *k*, *l*, and *m*.

(2) Pasteurized milk must not contain more than 1,000,000 bacteria per cubic centimeter at any time before pasteurization, nor more than 50,000 per cubic centimeter after pasteurization and at the time of delivery to consumer.

(3) Pasteurization of milk is hereby defined as follows: Heating every portion of milk to 140° F. and maintaining it at that temperature for 20 minutes.

(4) All milk heated as provided in regulation 3 shall be plainly marked on each bottle or can in which said milk is delivered to the consumer with a paper label bearing the inscription, "Pasteurized milk."

(5) Pasteurization of milk shall not exempt any producer or dealer from any other provisions of this ordinance.

SEC. 7. No milk shall be produced for sale in the city of Elizabeth unless complying in regard to method, equipment, transportation, and score and such other regulations as the board of health may from time to time adopt. It shall be the duty of the board of health to publish monthly after July 1, 1913, the names, score, condition of equipment, methods, sanitary conditions, or such other data it may think proper to inform the public of the standing and efficiency of every dealer in milk in the city of Elizabeth.

SEC. 8. If at any time any person or persons having any connection with a dairy from which milk is sold or delivered or offered for sale in the city of Elizabeth, or any resident member of the family of any person so situated shall be stricken with any communicable disease that has been or may be hereafter declared by this board to be dangerous to the public health, notice shall be given to said board immediately by the owner or owners of the dairy, and no milk produced from the dairy of any corporation, person, or association of persons so infected shall hereafter be sold or exposed for sale or delivered in the city of Elizabeth until special permission therefor has been granted by said board.

SEC. 9. No new dairy cow and no new bull which has not been demonstrated by the tuberculin test to be free from tuberculosis, and officially tagged to show that fact, shall be brought upon any dairy farm supplying milk to the city of Elizabeth and maintained there for a period longer than is necessary to have said cow or bull officially tuberculin tested, and any cow or bull so tested and reacting to the tuberculin test shall be tagged so as to show that fact, and killed or promptly removed from said farm.

SEC. 10. All cans, bottles, or other vessels of any sort used in the production, storage, sale, or distribution of milk in this city shall be cleaned and sterilized with boiling water or steam before they are again used for the same purpose, and all cans, measures, or other utensils made of metal shall be kept free from dents and rust. The filling of bottles except at the dairy or creamery is prohibited.

SEC. 11. In case of any sickness or contagious disease breaking out in the herd, the owner must immediately report same to the board of health, and no milk shall be sold

or delivered until the same has been properly investigated and precautions taken to prevent anything detrimental to the health of consumers. All cows suffering from tuberculosis or any other communicable bovine disease must be immediately disposed of and the stables disinfected.

SEC. 12. Everything about farms, stables, dairies, milk wagons, milk depots of dealers doing business in the city of Elizabeth, must at all times be open to inspection of the board of health, its officers and agents, and must be kept absolutely clean and in the best sanitary condition.

SEC. 13. Milk kept for sale in any store, shop, restaurant, market, bakery, or other establishment in the city of Elizabeth shall be kept in tightly closed or capped bottles, or other receptacles which have been approved by the board of health, and shall be kept in a covered cooler, box, or refrigerator properly drained and cared for, and which shall at no time be allowed to become foul or malodorous through lack of proper cleaning. Said store, shop, restaurant, market, bakery, or other establishment shall at all times be, when business is being carried on, open to inspection by any authorized agent of the board of health. Nothing contained herein shall prevent the sale of milk or cream from cans, closed coolers, or other receptacles in restaurants, hotels, or boarding houses when the milk is to be consumed in the premises by guests or patrons ordering the same.

SEC. 14. Nothing in these ordinances shall prevent the sale of skimmed milk or sour milk: *Providing, however*, That the same be sold as such; and skimmed milk shall only be kept for sale in utensils plainly marked "Skimmed milk." Skimmed milk and sour milk shall conform to the standards of purity and temperature required of sweet milk.

SEC. 15. It shall not be unlawful for any person to distribute or sell in a container having a capacity of not more than 12 fluid ounces, milk especially prepared for infants or infant feeding by adding thereto pure water, milk sugar, cereal starches, or other substances which shall not differ in purity, quality, or strength from the standard fixed by this ordinance: *Provided*, That such milk shall be labeled "Modified milk."

SEC. 16. No milk shall be transported or handled by any railroad or common carrier unless said milk is kept on ice during transit and unless said milk is protected from sun and rain after reaching its destination and before it has been received by the milkman. All vehicles used for handling or distributing milk or cream must be kept neat and clean and in good repair and must not be used for hauling manure, slops, or anything else of an objectionable nature, and must be provided therefor with a covered top of canvas or other material which will protect all vessels containing milk or cream from the rays of the sun.

SEC. 17. No milk shall be produced, kept, sold, or offered for sale in the city of Elizabeth from any cow or cows that are kept in a stable that is not in a clean, healthful, and sanitary condition, or unless it has been cooled immediately after it is drawn from the cow. Said milk shall not be cooled in any room which is not provided with tight walls and floor of such construction as will allow easy and thorough cleaning or which is not kept constantly clean or which is used for any other purpose and unless provision is made for the exclusion of outside dust and flies to the satisfaction of the board of health.

SEC. 18. The dairy score card adopted by the United States Department of Agriculture shall be used in the scoring of all dairies, and any person whose dairy scores lower than 60 shall be notified and given 30 days in which to make the necessary improvements, at the end of which time, if such improvements have not been made, the sale of milk and cream from such dairy shall be prohibited.

SEC. 19. Any person, corporation, or association of persons offending against or violating any of the provisions of sections 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, or 18 of this ordinance shall, on conviction thereof, pay a penalty of $10 for the first offense and for any subsequent offense may have their license revoked.

EL PASO, TEX.

Milk and Cream—Production, Care, and Sale. (Ord. Oct. 16, 1913.)

SECTION 1. *Unlawful to bring in, receive, or offer for sale milk or cream without a permit from the board of health.*—It shall be unlawful for any person or persons to bring or receive into the city of El Paso for sale or to sell or offer for sale therein any milk or cream without first having obtained from the board of health of the city of El Paso a permit so to do, as hereinafter provided.

SEC. 2. *What application shall contain—Notice of change in source of milk.*—To procure such permit, the applicant therefor shall file with the said board of health a written statement setting forth his residence, the number and kind of milk animals owned by him, the name and address of any and all persons from whom he is purchasing or obtaining milk, and the number of gallons of milk sold by him daily, as nearly as he can estimate the same, and if such permit be granted it shall be the duty of the holder thereof to notify the said board of health in writing of any change in the name or address of the person or persons from whom he obtains his supply of milk and also any change whatever of the animals from which he obtains his supply of milk.

SEC. 3. *Inspection—Fee for same.*—Whenever any such application is made each place where animals are kept from which the applicant desires to sell milk shall be visited and a careful and thorough inspection shall be made of the sanitary condition of such place for said animals, of the food upon which said animals are being fed, of the health and condition of said animals, and of the milk houses, milk vessels, and milk vehicles (if any) to be used. For this service of inspection any person herein authorized shall be entitled as a perquisite of his office to receive, and such applicant shall pay him, before inspection (provided for in this paragraph) is made, $1 for the inspection of each place where animals are kept from which the applicant desires to sell milk. And a like inspection shall also be made of any new place or new animal or animals from which the applicant desires to sell milk, whenever the applicant, during the life of his permit, shall notify the said board of health in writing of any such change (unless such place and all such animals shall have been examined within three months prior thereto, as aforesaid, upon the application of this or some other applicant).

SEC. 4. *Inspection every three months—One test of milk each month.*—The following inspections shall be made, and as many more inspections as the board of health or city health officer care to make, without fees; one inspection shall be made of each place where animals are kept from which milk or cream is sold by wagon or milk depot, and of the food of such last-mentioned animals, and of the health and condition of such last-mentioned animals themselves, and of the milk houses, milk vessels, and milk vehicles being used, at least once during each three months, or as often as is necessary, from and after this ordinance shall take effect; and at least one test of the milk sold, offered for sale, or kept for sale by each person, firm, or dairy delivering milk within said city by wagon, shall be made during each month from and after this ordinance shall take effect. Other inspections and tests as stated in this paragraph shall be made whenever any citizen of the city of El Paso shall make oath before or present his written oath to the city health officer or board of health of said city that to the best of his knowledge and belief a certain person or persons (naming or describing such person or persons) are violating this ordinance in any respect in said oath stated, provided the violation charged is respecting the place the animals are kept, the food fed them, the health or condition of the animals themselves, or the condition of the milk houses, milk vessels, or milk vehicles, or the condition of the milk or cream.

SEC. 5. *Duty of person finding violation of this ordinance to report to health department.*—Upon finding that any person has violated this ordinance it shall be the duty of the person so finding to make and file a complaint with the health department of

said city of El Paso, against the person so offending, but this shall in no wise preclude any other person from making such complaint.

SEC. 6. *Board of health shall issue permit; when—Permit subject to forfeiture, but only after hearing given by Board of Health.*—If it shall appear to the said board of health, upon considering such application, that the statements therein are true, and that the applicant does not propose selling or offering for sale any adulterated milk or cream, the milk or cream from unhealthy or unfit animals, or from animals fed on unsuitable food, or animals kept in an unsanitary place, or milk or cream put up in vessels, or in such milk house or handled in such manner as is likely to make it unwholesome, or milk or cream below the standard as herein prescribed, it shall be the duty of the said board of health to issue (without cost for the permit) to said applicant a permit to receive and bring into the city for sale and therein offer for sale milk and cream: *Provided, however*, That such permit shall be granted only on the express condition that it shall be subject to forfeiture as hereinafter provided by the said board of health, in its discretion; each forfeiture being upon proof to the satisfaction of said board of health of a violation by the holder thereof, his servant, or agent, of any of the provisions of this ordinance, or upon proof of violation by said holder of any law of this State providing against the adulteration of milk or cream: *And provided further*, That any such permit shall not be forfeited until after a hearing given by said board of health in the matter of the forfeiture of such permit after five days' notice in writing has been served on the holder of such permit by some person competent to testify of the delivery of said notice to him, which notice shall state the ground of complaint against such holder and the time and place where such hearing shall take place.

SEC. 7. *Permit good until March 1 after issuance, unless forfeited.*—Such permit shall be good until the first day of March next after the same is granted, unless previously forfeited.

SEC. 8. *All dairies and houses where milk and cream are offered for sale, subject to inspection, whether within city limits or not.*—All dairies, milk animals, corrals and stables where milk animals are kept, milk houses, milk vessels and vehicles, whether within the city of El Paso or not, from which milk or cream is sold, or offered for sale, or is supplied for the purpose of being sold within the limits of said city, and all places and vehicles within said city from which or in which milk or cream is sold, carried, or conveyed, shall be subject at all times to the entry and inspection by the city health officer, or any sanitary inspector or health officer of the city of El Paso, and it shall be the duty of all persons owning or having charge of such dairies, milk animals, and stables where milk animals are kept, milk vessels or vehicles, to allow such entry and inspection; and in case the owner or person in charge of a dairy, milk animals, corrals and stables where milk animals are kept, milk houses, milk vessels or vehicles without said city from which milk or cream is sold or supplied to the holder of a permit for the purpose of being sold within the said city, refuses to allow such entry or inspection, then such holder shall, upon notification by the board of health or any health officer of said city of such refusal, immediately discontinue selling or offering for sale any milk or cream furnished or supplied by such owner or person so refusing.

SEC. 9. *Persons offering milk for sale must furnish samples thereof to city health officer at any time demanded.*—All persons selling or offering for sale milk or cream within said city, or furnishing or supplying milk or cream to be sold therein, shall allow samples thereof to be taken by the city health officer or by any sanitary inspector or health officer of said city at any time when demanded, upon the officer demanding tendering the value of the sample or samples demanded.

SEC. 10. *Name and number of permit of dairyman must be posted in all places where milk is offered for sale or kept for commercial purposes—Board of health to furnish cards.*—All grocers, bakers, hotel keepers, restaurant keepers, and other persons having and offering for sale or for commercial purposes milk or cream, shall at all times keep the name and the number of the permit of the dairyman or person from whom the milk or

cream is obtained posted in a conspicuous place where such milk or cream is used, sold, or kept for sale, and the said board of health shall furnish a sufficient number of cards therefor to each person receiving a permit.

SEC. 11. *Lettering on milk wagons—Canvas cover or other material—Must cool to 60° F. before placing in closed cans.*—All milk wagons shall have the name of the owner and the number of the wagon license painted thereon in plain and legible English in letters or figures not less than 2 inches high. Every dealer in milk or cream who uses in his business a wagon, cart, or other vehicle shall, during the entire year have and keep upon such wagon, cart, or other vehicle a cover of canvas or other material, so as to securely protect the contents thereof from the rays of the sun. All dairymen, producers of milk, and other persons amenable to the provisions of this ordinance shall cool or reduce the heat of such milk to a temperature not exceeding 60° F. before the same shall be put into closed cans for marketing, shall keep such milk in closed vessels, and shall keep such vessels and ice boxes, etc., clean and in sanitary condition.

SEC. 12. *Unlawful to feed garbage, swill, or refuse—Water, ventilation, food, and surroundings must be wholesome.*—It shall be unlawful for any dairyman to feed to his milch animals or have in his possession with intent to feed to said animals any garbage, swill, refuse, or any improper food, or to sell or offer for sale to any dealer or other resident of the city of El Paso milk or cream from animals fed garbage, swill, refuse, or any improper food; nor shall any such dealer knowingly receive or sell any milk or cream produced from such dairy, nor shall the milk of animals which may be kept in any place where the water, ventilation, food, or surroundings are not wholesome and safe for the preservation of their health, safe condition, or the wholesomeness of their milk or cream be sold or offered for sale within the limits of the city of El Paso.

SEC. 13. *Milk and cream standards.*—The standard of milk and cream in and for the city of El Paso is hereby [sic]—

For milk:

Specific gravity, 1.029 at 60° F.
Solids, 12 per cent by weights.
Butter fat, 3.4 per cent by weights.
Cream, 9 per cent by volume.
Water, 88 per cent by weights.

For cream:

Butter fat, 20 per cent by weights.

SEC. 14. *Bacterial count, specific gravity, of standard—Unlawful to sell, offer, or have in possession for sale, milk or cream below standard.*—It shall hereafter be unlawful to sell, offer for sale, expose for sale, or keep for sale within the city of El Paso, milk or cream the nonpathogenic bacterial count of which shall exceed 150,000 per cubic centimeter. Any milk of less specific gravity than 1.029 at the temperature of 60° F., or any milk containing more than the proportion of water, or less than the proportion of solids, butter fat, or cream prescribed in the foregoing standard, and any cream containing less than 20 per cent of butter fat, shall be deemed to be below the standard, and it shall be unlawful for any person to sell, exchange, or deliver, or have in their possession or custody for sale, exchange, or delivery, any milk or cream below the standard as hereinbefore prescribed and defined, or any adulterated milk or cream, or any unwholesome milk or cream, or milk or cream from an unhealthy animal.

SEC. 15. *Unlawful to place milk or cream in bottles or other receptacles while upon delivery wagon, or to use bottles or cans lettered or marked with brand of any other dairy.*—It shall be unlawful for any dealer in milk or cream, or his agents, or employee, or other person to bottle, cause to be bottled, or to be placed in jars, cans, or other receptacles furnished by him or his agent or his employees any part of his milk or cream supply while upon the delivery wagon or at any other place than the milk house or

milk depot, except as provided in section 17 hereof, or to use any bottles or cans lettered or marked with the brand of any other dairy.

SEC. 16. *Existence of adulterated milk, or milk below the standard, declared a nuisance, to be abated by removing same at once—Does not apply to skimmed milk when sold as provided herein.*—The existence in El Paso of adulterated milk or cream, or milk or cream below the standard as heretofore prescribed and defined, is hereby declared a nuisance and is ordered to be abated accordingly; and the city health officer aforesaid and all sanitary inspectors and health officers of said city are hereby authorized to remove the same with all reasonable promptness: *Provided*, That this section shall not apply to skimmed milk when sold as such under the provision of this ordinance.

SEC. 17. (*a*) *Unlawful for any person afflicted with tuberculosis or other infectious disease, or where any member of his family is so afflicted, to milk or in any way handle milk or receptacles for same.*—It shall be unlawful and a violation of this ordinance for any person afflicted with tuberculosis or who has infectious disease, or any person any member of whose family has any infectious disease, to milk any animal or cleanse any bottle, jar, or receptacle for milk or cream, or to place any milk or cream in any bottle, jar, or receptacle, or to in any manner whatsoever handle any milk or cream which is intended for sale, exchange, or delivery, or which milk or cream is afterwards sold, exchanged, or delivered.

(*b*) *Regulations governing delivery of milk to house containing contagious diseases.*—It shall be unlawful to deliver milk in the original package to any house or houses in which there may be existing either scarlet fever, typhoid fever, diphtheria, measles, smallpox, or German measles, or any other contagious disease now required by ordinance to be placarded, but when milk or cream is delivered to any such house it must be transferred from the original dairy package to a container furnished by the purchaser of said milk, or the person receiving such milk for such purchaser.

SEC. 18. *Health officer to make written report every six months.*—The city health officers shall make a written report to the said board of health at the end of each six months after the time this ordinance takes effect, and this report shall show the name of each person or firm applying for a permit, the date of such application and the action thereon; the permits which have been forfeited, the time when forfeited, and for what cause forfeited; and the result of each inspection and test made. This report shall be then presented by the physician making the same to the said board of health, which board shall as soon as practicable examine the said report and indorse their action and recommendation, if any they have to make, to the city council of said city, and shall forthwith file the same with the city clerk of said city.

SEC. 19. *Unlawful to sell, offer or keep for sale, milk that does not come from dairy complying with regulations.*—It shall be unlawful for any person, firm, or corporation to sell, offer for sale, expose for sale or keep for sale within the corporate limits of the city of El Paso, any milk or cream which does not come from a diary or other place or is not the product of a dairy or other place where the following regulations are not complied with:

(*a*) *Properly constructed buildings.*—No building shall be used for stabling cows for dairy purposes which is not properly constructed, well lighted, ventilated, and provided with a floor that can be readily cleansed and drained.

(*b*) *No water-closet, cesspool, or inhabited room, etc., in cow stable.*—No water-closet, privy, cesspool, urinal, inhabited room, or workshop shall be located within any building, shed, or room which is used for stabling cows for dairy purposes, or for the storage of milk or cream; nor shall any hog, horse, sheep, goat, or other animal be kept in any room used for such purposes.

(*c*) *Size of stall.*—No space in buildings or sheds used for stabling cows more than 10 hours out of each 24 hours shall be less than 400 cubic feet for each cow, and the stalls thereof shall not be less than 4 feet in width.

(*d*) *Stables must be thoroughly clean, in good repair, and painted or whitewashed once every two years.*—All rooms and stables in which cows are kept for dairy purposes shall at all times be thoroughly clean and in good repair, and shall be painted at least once each two years or whitewashed at least once a year.

(*e*) *Manure to be removed daily.*—All manure shall be removed from the room or stable in which cows are kept for dairy purposes at least once each day and shall not be stored where odors from the same will be noticeable at the stable.

(*f*) *Udders to be cleaned before each milking.*—Every person keeping cows for the production of milk for sale shall cause the udder of each cow to be thoroughly cleansed before each milking and said cow to be properly fed and watered.

(*g*) *Fresh, clean drinking water in cow yard.*—Every person using any premises for keeping cows shall cause the yard in connection therewith to be provided with a proper receptacle for drinking water for such cows, and none but fresh, clean water shall be stored in such receptacle.

(*h*) *Inclosure to be graded and drained.*—Any inclosure in which cows are kept shall be graded and drained so as to keep the surface reasonably dry and to prevent the accumulation of water therein, and no garbage, urine, fecal matter, or similar substance shall be placed or allowed to remain in such inclosure.

(*i*) *Requirements as to pails, cans, etc.*—Every person keeping cows for dairy purposes shall provide and use a sufficient number of pails, cans, or other receptacles, made of glass, stoneware, glazed metal, or No. 1 tin, for the reception of, storage, and delivery of milk, and shall cause all milk as soon as drawn from the cows to be removed from the room in which the cows are kept to a separate milk room.

(*j*) *Milk room to be screened.*—The milk room shall be thoroughly screened with not coarser than 14 wire mesh, and thoroughly protected against flies, kept scrupulously clean, and free from dust and shall be separated from the barn or stable in which cows are kept. It shall be supplied with pure water and suitable facilities for straining, cooling, and storing milk, and washing and sterilizing all utensils and apparatus in which milk is received, stored, and delivered.

(*k*) *Cans and receptacles to be sterilized daily.*—All cans, measures, bottles, and other receptacles of any sort used in the sale or handling of milk shall be sterilized (scalded with boiling water or live steam) daily.

(*l*) *Milk to be strained.*—All milk shall be strained through cloth or wire-cloth strainers, and if kept in milk room longer than three hours shall be stored in a covered cooler or refrigerator.

(*m*) *Every person engaged in production or sale of milk shall immediately notify health department of any infectious disease among his family or employees.*—Every person engaged in the production, storage, transportation, sale, delivery, or distribution of milk, immediately on the occurrence of any case or cases of infectious disease, either in himself or his family or among his employees or their immediate associates, or within the building or premises where milk is stored, sold, or distributed, shall notify the city health officer.

(*n*) *No person having or having been in contact with person having infectious disease shall milk any cows or handle milk products.*—No person having an infectious disease, or having recently been in contact with a person having an infectious disease shall milk or handle any cows, measures, or other vessels used for milk intended for sale until all danger of communicating such disease to other persons shall have passed.

(*o*) *Regarding offspring of cows infected with tuberculosis.*—The offspring from cows infected with tuberculosis must be promptly removed from their dams and must be fed on milk from nonreacting cows or pasteurized (heated to a temperature of 165° F.) milk from the reacting ones.

SEC. 20. *Unlawful to sell or offer for sale watered or impure milk, or milk from cow kept upon garbage, or from cows kept in connection with any family where there are infectious diseases—Provisions regarding "skimmed milk."*—That it shall hereafter be

unlawful for any person, either by himself or agent, to sell or expose for sale or exchange within the corporate limits of the city of El Paso any unwholesome, watered, adulterated, or impure milk or swill milk or colestrum, or milk from cows kept upon garbage, swill, or any other substance in a state of putrefaction or other deleterious substances, or from cows kept in connection with any family in which there are infectious diseases, or from sick or diseased cows: *Provided*, "Skimmed milk" may be sold if on the can, package, or other receptacle from which it is sold, and the can, package, or other receptacle in which it is delivered to the purchaser the words "Skimmed milk" are distinctly painted in letters not less than 1 inch in length, except that when bottles are used the lettering upon said bottles shall be not less than one-fourth of an inch in length.

SEC. 21. *Unlawful to sell or offer for sale milk from cow not tested for tuberculosis within six months.*—No person shall, within the limits of the city of El Paso, sell, offer for sale, expose for sale, or keep for sale any milk or cream which is the product, in whole or in part, of a cow which within six months prior thereto has not been tested and examined for tuberculosis by some person authorized by the terms hereof to make such test and examination, who shall in such examination use the tuberculin test, and certified by such person to be free from tuberculosis, except as hereinafter provided.

SEC. 22. *Proof of guilt of violation of this ordinance.*—It shall be prima facie proof that a person accused under the foregoing section is guilty if it be shown that he is engaged in selling, offering for sale, exposing for sale, or keeping for sale in the city of El Paso milk or cream the product of a dairy in which a milch cow not branded as hereinafter provided for is kept in the same barn, inclosure, building, stable, or structure as other cows whose milk or cream is sold, offered for sale, exposed for sale, or kept for sale in said city: *Provided*, This shall not apply to such food products as have been approved after proper inspection made by the proper officers of the United States in compliance with the acts of Congress regulating the manufacture and sale of food and food products.

SEC. 23. *Disposition of cows infected with tuberculosis.*—When it is established that any cow belonging to any dairy is infected or afflicted with tuberculosis, the said animal may be kept on the premises, but shall be isolated at a distance of not less than 80 feet from any noninfected animal on said premises.

SEC. 24. *Office of tubercular inspector—Qualifications—Election—Bond.*—The office of tubercular inspector is hereby created. The tubercular inspector must be a graduate veterinary surgeon; he shall be elected by the board of health, and such election shall be certified to the mayor by the secretary of the board of health; he shall take the oath of office prescribed by section 12 of the charter of the city of El Paso; he shall give bond to the city of El Paso conditioned for the faithful discharge of his duties, and that he will not negligently or willfully make false report as to any animal he may test; and any person or persons damaged by such false report, if any, may sue and recover upon said bond in any court of competent jurisdiction, said bond to be in the sum of $500, and shall be approved by the city council.

(*b*) *Duties of inspector.*—It shall be the duty of said tubercular inspector to make the examinations provided for in this ordinance when so directed by the board of health or the city health officer: *Provided, however*, That the said board of health or the city health officer may, when it is practicable and convenient and can be done without expense to the owner or owners of animals to be inspected, authorize such inspections to be made by a representative of the United States Bureau of Animal Industry, and his reports and acts with reference to such inspections shall be as conclusive and binding as those of the tubercular inspector.

(*c*) *Compensation of inspector—Paid by dairies.*—The city tubercular inspector shall be authorized to receive as compensation for his services the following rates, to wit: From dairies he shall receive the sum of not less than $10 a day: *Provided, however*,

That when the number of cows assembled and tested at any one place is 20 or more, and should the said cows belong to different owners, each owner shall pay for such cow or cows as shall belong to him: *Provided, further,* That the city council may at any time by vote and without amending this ordinance fix and pay the city tubercular inspector a salary.

(*d*) *May be removed from office.*—The city tubercular inspector may be removed from office by the board of health, but he shall be first allowed a reasonable opportunity to appear and present a defense.

SEC. 25. *Unlawful to sell, or expose for sale, milk or cream from any dairy located outside of State of Texas, unless approved by United States inspector, unless cows have been examined within six months and pronounced free from tubercular infection.*—Where milk or cream is sold, offered for sale, exposed for sale, or kept for sale in the city of El Paso and is the product of a dairy or of cows kept without the limits of the State of Texas, unless such milk or cream so offered for sale shall have been approved upon inspection by the officials of the United States, in compliance with the pure-food acts passed by Congress; then it shall be lawful to sell, offer for sale, expose for sale, or keep for sale such milk or cream, unless the same are the products of a cow or cows which within six months have been tested and examined with the tuberculin test and pronounced free from tubersulosis by a graduate veterinary surgeon residing in the State in which such cows are kept; and the certificate of such veterinarian shall be accompanied by a certificate of the board of health or State sanitary board, or other board of such State charged with the duty of enforcing the pure-food laws of such State, reciting that such veterinarian is a graduate veterinary surgeon and is capable, qualified, and of good character and good professional standing.

SEC. 26. *Brands to be used by those authorized to test cows for tuberculosis.*—Every person authorized to test and examine cows as aforesaid shall brand or have said cow branded with a branding iron, as follows: If such cow be found to be infected or afflicted with tuberculosis it shall be branded on the left shoulder "TB"; if such cow should, after test being made, show excessive temperature, but not sufficiently excessive to warrant such cow being declared afflicted or infected with tuberculosis, it shall be branded "S" on the left hip, but this shall be a hair brand; if such cow should be declared sound or free from tuberculosis infection it shall be branded "O" on the right shoulder; and when a cow has once been branded as "TB", as herein provided, no subsequent test of such cow shall be recognized.

SEC. 27. *List of those authorized to make tests.*—The board of health shall prepare and keep a list which shall be a public record of the names and addresses of all persons authorized by it to make the tests and examinations herein mentioned, and said list shall be open to the inspection of all persons at all reasonable and proper times.

SEC. 28. *Must have permit to sell milk—May be revoked by board of health.*—No person, firm, or corporation shall engage in the business of selling, offering for sale, exposing for sale, or keeping for sale in the city of El Paso any milk or cream without a permit in writing from the board of health. If, in the opinion of the board of health, the person, firm, or corporation to whom or to which such a permit has been granted has violated any of the provisions of this ordinance in person or by any employee, the board of health shall revoke such permit, and thereafter such permit shall be null and void; but before said revocation the said board of health shall give the person, firm, or corporation to whom or to which it has been granted a reasonable opportunity to appear and show why such permit should not be revoked, as hereinbefore provided.

SEC. 29. *Unlawful to add to dairy stock infected with tuberculosis.*—It shall be unlawful to acquire and add to any dairy stock whose product is now being disposed of in the city any cow or other animal infected with tuberculosis.

SEC. 30. *Unlawful to sell cow adjudged to be tubercular—Penalty.*—That it shall be unlawful for any person hereafter to sell to any person any cow which shall be tested and adjudged to be tubercular, according to the provisions herein, without notifying

such purchaser in writing that said cow has been so tested and adjudged; and any person violating the provisions of this section who shall make such a sale within the corporate limits of the city of El Paso shall be subject to a fine of not less than $25 nor more than $200; if he hold a permit to sell milk, cream, or cheese or other dairy product within said city limits, he shall lose the right to sell under such permit, and such permit shall be revoked, or if he has not such a permit, the same shall be denied him for a period of five years after making such sale.

SEC. 31. *Penalty for violation of this ordinance.*—If any person shall sell, offer for sale, expose for sale, or keep for sale in the city of El Paso any milk or cream, except as permitted by this ordinance, or otherwise violate the provisions of this ordinance, the person so offending shall be fined in any sum not less than $25 nor more than $200.

SEC. 32. *Test sheets to be filed with city health officer—Penalty for violation.*—It shall be the duty of every dairyman or other person, firm, or corporation engaged in the dairy business, or in selling milk or cream, as aforesaid, to file with the city health officer, within 10 days after any cows belonging to such person, firm, or corporation shall have been tested, a test sheet furnished and certified by the tubercular inspector or other person herein authorized to make tests showing the result of the test made, and such test sheet shall be kept on file in the city health office, and any person, firm, or corporation violating the provisions of this section shall be liable to the penalty provided in section 31 of this ordinance.

SEC. 33. *Who shall be deemed as persons selling milk, and amenable under this ordinance.*—All proprietors, managers, superintendents, stewards, waiters, and other persons in authority in hotels, restaurants, saloons, confectioneries, stores, and like institutions, where milk or cream is sold, and all owners, part owners, proprietors, managers, superintendents, and other persons in authority in hospitals, sanitariums, and like institutions where milk or cream is served shall be deemed and considered persons selling, offering for sale, exposing for sale, and keeping for sale milk and cream, and shall be amenable to the provisions of this ordinance.

SEC. 34. *Repealing other milk ordinances.*—All ordinances and parts of ordinances heretofore passed regulating the sale of milk or cream, or either, are hereby repealed.

EVANSTON, ILL.

Foodstuffs—Care and Sale of. (Ord. June 3, 1913.)

SECTION 1. That every building, room, basement, or part thereof, or inclosure, occupied, used, or maintained as a bakery, confectionery, cannery, packing house, slaughterhouse, creamery, cheese factory, restaurant, hotel, grocery, meat market, shop, warehouse, or manufacturing establishment used for the preparation, manufacture, packing, storage, distribution, or sale of any food which is intended for sale shall be properly and adequately drained, lighted, plumbed, and ventilated, and shall be conducted with strict regard to the influence of such conditions upon the health of the clerks, employees, and operatives or other persons therein employed, and the purity and wholesomeness of the food therein produced, prepared, manufactured, stored, sold, or distributed.

SEC. 2. The floors, side walls, ceilings, furniture, receptacles, implements, and machinery of every such establishment or place where such food intended for sale is produced, prepared, manufactured, packed, stored, sold, or distributed, and all cars, trucks, and vehicles used in the transportation of such food products shall at no time be kept or permitted to remain in an unclean, unhealthful, or insanitary condition; and for the purpose of this ordinance unclean, unhealthful, or insanitary conditions shall be deemed to exist if food, in the process of production, preparation, manufacture, packing, storing, sale, transportation, or distribution, is not securely protected from flies, dust, or dirt, and as far as may be necessary by all reasonable means protected from all other foreign or injurious contamination; or if the refuse, dirt, or waste

products subject to decomposition and fermentation incident to the manufacture, preparation, packing, storing, selling, transportation, or distribution of such food are not removed daily; or if all trucks, trays, boxes, buckets, or other receptacles or the shutes, platforms, racks, tables, shelves, knives, saws, cleavers, or other utensils or machinery used in moving, handling, cutting, chopping, mixing, canning, or in other processes are not thoroughly cleaned daily; or if the clothing or person of clerks, employees, operatives, or other persons therein employed is unclean.

SEC. 3. All such factories, buildings, or parts thereof containing food shall be provided with proper doors and screens adequate to prevent contamination of the food by flies.

SEC. 4. All bakeries, groceries, markets, restaurants, or food factories shall be supplied with sanitary toilets and with sanitary lavatories with running water. Such toilets shall not open directly from any room in which food is prepared, exposed for sale, or stored, and such toilets must have floors of nonabsorbent material, which must be washed daily. Such toilets shall be furnished with separate ventilating flues and pipes, discharging into open air, and such toilets shall be lighted from the outside or provided with good and sufficient artificial light approved by the commissioner of public works. Lavatories and washrooms must be furnished with soap, running water, and clean towels and be maintained in a sanitary condition. Clerks, employees, operatives, and all persons who handle the material from which food is prepared, or the finished products, before beginning work or after visiting the toilet shall wash their hands thoroughly in clean water. There shall be no expectorating on food, utensils, floors, or side walls in any such buildings or any parts thereof.

SEC. 5. If any such building, factory, or part thereof, or if any such furniture, receptacles, implements, appliances, or machinery, or if any car, truck, or vehicle used in the moving, distributing, or transportation of any food products shall be constructed, kept, maintained, or permitted to remain in a condition contrary to any of the requirements of this ordinance, the same is hereby declared a nuisance. Whoever allows, maintains, or permits to exist a nuisance as herein defined shall be guilty of a misdemeanor, and on conviction thereof shall be punished as herein provided.

SEC. 6. No person or persons shall sleep or be allowed to sleep in any room where food is manufactured, prepared for sale, served, sold, or stored unless all such foods therein are at all times in hermetically sealed packages.

SEC. 7. No employer shall require, suffer, or permit any person who is affected with any contagious or venereal disease to work, and no person so affected shall work in any such building, factory, or part thereof, or in any car, truck, or vehicle used for the production, preparation, manufacture, packing, storage, sale, transportation, distribution of food, as hereby provided.

SEC. 8. No fruits, vegetables, meats, sea foods, confectionery, or other articles to be sold, or offered, or intended for sale for human food shall be displayed or stored on the sidewalk or outside any place of business, or in any open door or window, nor shall they be transported upon a public or private way unless such articles are covered by cases of glass, wood, metal, paper, or other proper covering. No vegetables or fruit to be sold for human food shall be displayed or stored except in clean receptacles. No bakery or dairy food products or food prepared for immediate consumption—such as cooked meats, mincemeat, pickles, sauerkraut, or candy—shall be displayed except in glass cases or under proper covers. Raw meats shall be kept in a strictly sanitary condition. No fruits, vegetables, meats, sea foods, confectionery, or other articles to be sold or offered or intended for sale for human food shall be stored or displayed in any store except such fruits, vegetables, meats, sea foods, confectionery, etc., shall be placed on a raised platform, elevated above the floor level or otherwise suitably protected from contamination with the floor and the refuse thereon.

SEC. 9. All bread sold or offered for sale as human food must be wrapped in clean paper within a reasonable time of removal from the oven and remain thus wrapped when offered for sale and until delivery to the consumer.

SEC. 10. No live fowls intended for sale shall be kept in any basement or cellar or under any sidewalk. Places where such fowls are killed must have cement floors with properly trapped sewer connections. Such floors must be thoroughly washed after each killing and at all times kept in a clean and sanitary condition.

SEC. 11. All utensils and receptacles used in the manufacture, transportation, and distribution of ice cream must be of porcelain, granite ware, dipped or block tin, or other seamless material in good condition, and such utensils and receptacles shall, if used more than once, be sterilized before using at a temperature of not less than 212° F. for a period of not less than 15 minutes and be kept so that their sterility shall be maintained. No refrozen ice cream shall be sold, given away, or distributed.

SEC. 12. All soda-water fountains and all places where soda water or nonintoxicating drinks of any kind, or where ice cream is sold or offered for sale, shall be kept in a clean and sanitary condition, and there shall be a sufficient supply of glasses, dishes, spoons, and other utensils to serve such refreshments in a clean and sanitary manner; and all such glasses, dishes, spoons, and other utensils shall be washed in clean, hot, soapy water and thoroughly rinsed after each time such glasses, dishes, spoons, and other utensils are used, and shall be dried in a sanitary manner.

SEC. 13. Any person who violates any of the provisions of this ordinance shall be guilty of a misdemeanor and shall be punished for the first offense by a fine of not less than $10, nor more than $200; for the second offense by a fine of not less than $50, or more than $200; for the third offense and subsequent offenses by a fine of $200.

EVERETT, WASH.

Foodstuffs—Production, Care, and Sale. (Ord. 1551, Oct. 28, 1913.)

SECTION 1. Every person keeping, maintaining, or being in charge of any factory, public or private market, stall, shop, store warehouse, cold storage, cart, wagon, or other vehicle in or from which any meat, fish, oysters, birds, fowls, vegetables, fruit, milk, or other provisions are manufactured, held, kept, stored, or offered for sale or other disposition as food for human beings, shall keep same in clean, pure, and wholesome condition.

SEC. 2. All meat, game, fish, vegetables, fruit, prepared food products, and candies, exposed for sale in open receptacles or broken packages, shall be kept not less than 2 feet above the floor of the building, shop, booth, or place where they are so exposed, and shall be protected in such manner as to prevent, as far as practicable, dust, flies, and insects from coming in contact with them. Cut fresh meats, fresh fish, and all fresh fruits (except citrus fruits, melons, bananas, and apples) exposed for sale shall be kept in properly ventilated cases, or receptacles having glass tops. No food shall be exposed or displayed for sale upon any box, table, shelf, or other object on any street, sidewalk, alley, or public place, except in such places as have been designated as public markets, and except wagons from which foodstuffs are being peddled; but all food so peddled from wagons shall be carefully covered, so as to protect such foodstuffs from flies and dust.

SEC. 3. The kitchens of all restaurants and hotels, all candy factories, fish markets, meat markets, and bakeries shall have good and proper screens at all openings in such places where flies or other insects can enter, for the purpose of excluding such insects from said places.

SEC. 4. No decayed matter of any kind shall be allowed to remain in any receptacle wherein are kept any fruits, meats, vegetables, or other food for sale.

SEC. 5. No meats, fish, game, vegetables, fruits, or other foodstuffs prepared or unprepared shall be kept for sale in any room in which a toilet is located, or in any room opening directly into a toilet room, unless there is outside ventilation to such toilet room.

SEC. 6. In every place where meats, fish, vegetables, fowls, fruits, groceries, or any other food for human beings shall be kept for sale, there shall be in the room or rooms where the business is carried on, where there is a public water supply, at least one running-water faucet, with lavatory conveniences for the use of employees.

SEC. 7. No baking of bread, cakes, or pies, or manufacture of candy, or cooking of food, for sale, shall be done in any cellar, basement, or other room unless there be direct ventilation of the same.

SEC. 8. Flour, meal, and other cereal products shall be kept in a dry, airy room or rooms, so arranged that the floors and other facilities for storing the same can be easily cleaned and kept clean.

SEC. 9. Where persons employed in a bakery sleep on the premises, their sleeping quarters shall be separate from all rooms where flour, meal, or manufactured baker's goods are kept or stored; and every person delivering bread or any other bakery product from any wagon or cart shall keep with such wagon or cart one or more pairs of clean gloves of canvas or similar material, which he shall wear while handling such bread or bakery products; and said gloves shall be used for no other purpose.

SEC. 10. Every person owning, managing, or in charge of any premises where meats, fish, oysters, fowls, fruits, or vegetables are canned, cured, or preserved for human food, shall conduct the same in a neat, clean, and sanitary manner; and no such person shall can, cure, or otherwise preserve any meat, fish, oysters, fowls, fruits, or vegetables for human food which shall have become diseased, decayed, or unwholesome; nor shall any such person can, cure, or otherwise preserve foods taken from filthy boxes, baskets, or other containers, or use any chemical deleterious to health in the process of such canning, curing, or preserving. No preservative shall be used in meats except salt, saltpeter, sugar, pure spices, wood smoke, and vinegar.

SEC. 11. No person maintaining or in charge of any restaurant, hotel, or boarding house, or other place where food is sold, served, or manufactured in either a cooked or raw state, shall keep such place in a filthy or insanitary condition. And all persons employed in or about such places shall keep themselves and their clothing in a clean, sanitary, and healthful condition.

SEC. 12. No person suffering from tuberculosis or any other communicable disease shall be employed in or about any restaurant, hotel, or boarding house, or other place where food is sold or served, in any such manner as that he or she will come in contact with such food.

SEC. 13. No person maintaining or in charge of any restaurant, hotel, or boarding house, or other place where food is served or sold, either in a cooked condition or otherwise, shall serve or sell or cause to be served or sold, any tainted or diseased meat, fish, oysters, fowls, or any decayed or partially decayed or unwholesome fruit or vegetables, or any other unwholesome food whatever.

SEC. 14. No meat, fish, oysters, birds, fowls, fruits, vegetables, milk, or other provisions of any kind not being in a healthy, sound, and wholesome condition, and no part of any animal or fish that dies by accident or from disease, shall be brought into the city of Everett for the purpose of sale or gift as human food; nor shall the same be offered for sale by any person at or in any public or private market, store, stall, warehouse, cold storage, or other place of business.

SEC. 15. No person shall keep live chickens, ducks, turkeys, or other fowls in any cellar or basement underneath any grocery store, market, or other place where uncanned foodstuffs are kept, or in any room where such foodstuffs are kept, prepared, offered for sale, or sold.

SEC. 16. Every slaughterhouse or other place where fowls are killed or prepared for sale or storage shall be constructed with a wood or cement floor with proper trap sewer connection with a sewer or cesspool; and such cesspool shall be of proper construction, walled up, arched over, and properly ventilated; and immediately after

each killing of such fowls the floor shall be washed thoroughly and the place shall at all times be kept in a clean and wholesome condition.

SEC. 17. Every person owning or managing any store, shop, or commission house where meats, fish, fowls, fruits, or vegetables are kept or offered for sale or sold, and every person owning or managing any hotel, restaurant, or boarding house, is required to provide metallic receptacles, with close-fitting covers, sufficient for the disposition of all garbage from their premises; and no person shall remove any such garbage from such receptacles after it has been deposited therein, except for the purpose of transporting the same to the place for the destruction or other disposition thereof.

SEC. 18. No dog shall be allowed in any of the places of business mentioned in this ordinance, or be brought therein by any customer thereof.

SEC. 19. It shall be the duty of the health officer and deputies of the city of Everett to visit and inspect at frequent intervals every public or private market, stall, shop, store, warehouse, cannery, factory, restaurant, cold storage, slaughterhouse, and all other places, and all carts, wagons, or other vehicles of vendors or street hawkers in the city of Everett, in or from which any of the articles of food for human beings in this ordinance mentioned are manufactured, kept, held, prepared, or offered for sale, and report to the health officer any violation of the terms or provisions of this ordinance.

SEC. 20. In order to enable the said health officer and his deputies to make the inspections herein provided for, they shall have access to all parts of any building where business of the kind contemplated by this ordinance is carried on, at all reasonable hours.

SEC. 21. Whenever the health officer or his deputies shall find in or about any of the places or vehicles mentioned in section 19 hereof any unhealthy, diseased, unwholesome, or deleterious foodstuffs of the kind mentioned in this ordinance he may give notice to the owner or manager of such place to at once remove the said foodstuffs to such place as he may designate and there destroy the same; and such owner or manager shall at once remove such foodstuffs to the place designated and destroy the same, or such health officer or his deputies may seize such foodstuffs and destroy the same.

SEC. 22. The provisions of this ordinance shall apply to all factories for the manufacture and sale of ice cream, confectionery, and soft drinks, and all premises occupied by street vendors in the manufacture of tamales, candy, and other like articles of food.

SEC. 23. The word "person" whenever used in this ordinance shall include corporations and the managing agents and servants thereof.

SEC. 24. The ventilation of rooms, within the meaning of this ordinance, shall consist of an opening to the outer air at each end of such room, said opening to be at least 2 feet square, and to be so placed as to produce a free circulation of air in such room.

SEC. 25. Wagons or cars in which meat or meat food products are transported shall be kept in a clean and sanitary condition. The wagons used in transporting loose meat shall be so closed and covered that the contents shall be kept clean and free from contamination.

SEC. 26. Any person or persons, firm, or corporation violating any of the provisions of this ordinance shall, upon conviction, be punished by a fine of not exceeding $100 or by imprisonment for a period of not exceeding 30 days, or by both such fine and imprisonment.

SEC. 27. Whereas the above regulations are necessary for the enforcement of proper sanitary regulations in the city of Everett, an emergency is declared to exist, and this ordinance shall take effect upon its passage and publication.